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ORIGINAL ARTICLES

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INTESTINAL PROTOZOA—A REVIEW FROM THE STANFORD MEDICAL CLINIC *

By ALFRED C. REED, M. D., and HARRY A. WYCKOFF, M. D., of San Francisco
(From the Stanford University Medical School.)

During the past year there have come under our observation in the Stanford Clinic of Parasitology and Tropical Medicine ninety-five cases of intestinal protozoal infections. The varieties and frequency of these protozoa were as follows:

E. coli, 56; E. histolytica, 17; giardia, 18; iodameba, 5; chilomastix, 7; trichomonas, 3; E. nana, 6; balantidium, 1.

It is our desire at this time to give a very brief resumé of these cases and the conclusions we have reached, especially with regard to pathogenicity and treatment.

Of the 95 cases, 65 harbored a single intestinal parasite. Thirty had multiple infections. Several were complicated further by the presence of helminths, chiefly trichuris, Bothriocephalis, hookworm, and oxyuris. One Mexican boy of 15 years showed a mixed infection with E. coli, E. hystolytica, iodameba, giardia, and trichiuris. Of the 95 cases, 48 had never been outside the United States, and of these most had lived at least five years in California. The other 47 cases were drawn from twenty different foreign countries, Italy supplying the largest number of 7. Thirty-one cases were females and 64 males. The age incidence was not significant. Sixty-three cases, or 66 per cent, presented a history of gastro-intestinal disturbances. Of these 63, 36 had associated some other unrelated definite disease condition. Of the 32 in whom no history of gastro-intestinal abnormality was found, 1 each suffered from asthma, cancer, Detel's crisis, bronchitis, diabetes, venereal disease, malaria, and Addison's disease. In three each the outstanding difficulty was hypertension and psychosis. Eye, ear, and throat disorders claimed a total of 7; heart disease, 5; and Type II arthritis, 6. Thus 32, or 33 per cent of all the cases, were discovered in the course of a general complete examination for some condition not referred to the gastro-intestinal tract. In these 32 cases the relation of the parasite to the clinical condition present is of considerable interest. Twenty of these cases were cured of their protozoal infections by treatment. In each case where the protozoa were eradicated, a definite clinical improvement in the patient was noted. This was in the group where no gastro-intestinal disturbance was found, past or present. Only one inference can be drawn. There must have been some pathologic effect of the protozoa on their host. In only a few cases could one assume any direct relation between the protozoa and the pathology present. In most it seems that the presence of the protozoa tended to decrease the resistance of the host to the major disease condition present and the removal of this intestinal handicap improved the vitality and the reaction against whatever other pathologic factors were present.

Of the total 95 cases, 15 suffered from Type II hypertrophic arthritis. These have been discussed elsewhere. No characteristic or remarkable findings were noted in the blood counts. A blood count was made on each. So far as red cells and hemoglobin was concerned, 53 were normal and 42 anemic to some degree, none severe. In 14 cases the eosinophil count exceeded 3 per cent. In these 14 the average eosinophilia was 6.7 per cent.

The association of constipation or diarrhea with the parasites was interesting. Of the 95 cases, 46, or 48 per cent, reported normal regularity of bowel movements. Diarrhea was predominant in 13, or 13 per cent, and marked constipation was the rule in 36, or 41 per cent.

CONCLUSIONS

From the study of this series we have drawn three general conclusions:

1. In no case can it be said with safety that the presence of intestinal protozoa is not of pathogenic importance. This statement is made irrespective of the variety of protozoan. In nearly every

* Presented to the Section on Medicine at the Fifty-second annual session of the California Medical Association.

case there is present either pathology or symptoms which can be related logically in some connection with the protozoan infection. The presence of the protozoa seems to constitute an added handicap in the reaction of the host to other and unrelated disease conditions. With this handicap removed, a better fight is waged against other morbid factors. The corollary of this conclusion is that intestinal protozoa are at least potentially pathogenic. At another time we will discuss the detailed pathogenicity of E. coli including the so-called Councilmania type. The variation in pathogenicity between E. histolytica and the less dangerous flagellates, such as trichomonas, need not be any greater than the actual variation in pathogenicity of E. histolytica in different hosts and under varying circumstances.

2. The only pathognomonic or even seriously suspicious indication of the presence of a protozoan intestinal infection is furnished by the microscopic demonstration of the organisms in the stools. Calling to mind the occurrence in our series of such a marked disproportion between gastro-intestinal and diarrheic symptoms and the presence of protozoa, it is evident that no clinical observation of any sort will furnish the clue to the presence of protozoa. Every patient suffering from gastro-intestinal disturbance should be examined for protozoa. Every case of obscure or incomplete diagnosis should have an examination for protozoa. And to these we might add, every patient with chronic diseases which are resistant to treatment, should have an examination for protozoa. For clinical purposes, a patient cannot be said with reasonable certainty to be free of protozoa short of six stool examinations by a competent examiner on six different days, including specimens following epsom salts.

3. Our experience has gradually led us to a fairly routine and standard type of treatment. Many drugs and methods have been tried out. We are now engaged on the investigation of better methods for the treatment of flagellates. At present they are ordinarily almost incurable except by persistent and severe measures. In our series among those patients who received a full course of treatment and where at least two months have elapsed with cyst-free stools, we find the eradication of E. coli in 12 cases, E. histolytica in 9 cases, E. coli (Councilmania type) in 11 cases, giardia in 8 cases, and chilomastix in 1 case. For amebas we feel that cure can be considered established if the stools remain cyst-free for two months following the termination of treatment. In the case of flagellates this limit is not sufficient. In one of our cases of giardia, cysts reappeared after an absence of five months. The criterion of cure in flagellate infections is still indefinite.

Our standard treatment for all intestinal protozoa is as follows: Ten daily hypodermics of emetin hydrochloride, 1 grain each. These are followed by pills or powder of bismuth emetin iodide, 3 grains daily, to a total of 40 grains. At the same time three full doses of neosalvarsan are administered at weekly intervals. In the case of flagellates as well as in long-standing cases of E. histolytica infections, massive colon irrigations are frequently added, using 1:2000 thymol or quinin, and later, oil enemas containing camphor, aristol, and similar anti-parasiticides.

Carbon tetrachloride has been carefully employed in moderate as well as large dosage, and has proved useless for protozoa and cestodes. We have found its only value to be against nematodes. Incidentally, we have found that 15 cc. of carbon tetrachloride given in an iced diluted emulsion is quite safe when the liver and kidneys are fairly normal. Two types of reaction occur with this drug. First, that associated with direct irritation of the stomach. Second, that which is characteristic of chloroform poisoning, either immediate or delayed. One man, a Spaniard with hookworm, inadvertently received 35 cc. of carbon tetrachloride. Within two hours he suffered a severe chill, an epilepti form seizure, severe vomiting, and then somnolence. His recovery was complete, but the hookworms were not removed.

Following the standard treatment outlined above, a certain number of patients will develop mild symptoms of emetin poisoning, and the course of treatment must be modified accordingly. The commonest symptoms of this sort are weakness, especially of the lower extremities, breathlessness, and undue tiring. Some patients are intolerant of bismuth emetin iodide, and vomiting can only be prevented by varying the method of administration.

Considering the wide prevalence in California of protozoan infections of man, the wide dissemination of cysts by persons who act as carriers, and the pathologic importance of the parasite for clinical medicine, we believe more detailed attention to them by the physician in general would be justifiable.

350 Post St.

DISCUSSION

Roy W. Hammack, Pacific Mutual Building, Los Angeles—The growing interest in the subject of intestinal protozoa is well reflected in this paper. It is my experience in the laboratory that the demand for stool examinations is rapidly increasing. Yet our knowledge of the pathogenicity of the intestinal protozoa has not grown so rapidly as our knowledge of the occurrence and character of the organisms themselves. We hear every variety of opinion regarding the effect of the protozoa on the host from the one extreme view that only E. histolytica is pathogenic, to the other, that all protozoa are pathogenic. Some enthusiasts even claim to be able to predict from the symptoms of a patient the finding of flagellates in the stool. Studies in pathologic anatomy, while sometimes suggestive, have proven little except in amebiasis. Experimental investigation of the manner of action of these organisms is greatly needed, but unfortunately the problem is a very difficult one.

Such a study and critical review of a large number of infections as presented in this paper is a real contribution to our knowledge of protozoan infections. The authors' conclusions are, I believe, sound and conservative; yet one cannot help wishing for more detailed evidence in their support. Particularly is this true of the statement that "In nearly every case there is present either pathology or symptoms which can be related logically in some connection with the protozoan infection."

Alfred C. Reed (closing)—Hammack's point is well taken. In an earlier paper we had discussed this in more detail, and at this time, for the sake of brevity, merely state our conclusions. It is our belief that the lines needing special investigation are chiefly two: First, improved treatment of all the

intestinal protozoa. Second, definite information as to their individual pathogenicity. Our ideas on this subject have been elaborated elsewhere.

Harry A. Wyckoff (closing)—It is indeed true that our knowledge relating to the pathogenicity of intestinal protozoa is very imperfect.

We have endeavored, in another place, to collect some facts in this connection, with a view to establishing a nucleus around which the results of further observation might be grouped. The present paper is the record of an attempt to utilize clinical material in carrying out this plan.

EFFECT OF STRUCTURAL CHANGES IN THE LUMBAR AND PELVIC REGIONS ON THE SCIATIC NERVE *

By HALBERT W. CHAPPEL, M. D., Los Angeles

Malformation, disease, or trauma of the lumbar spine or pelvis, may cause motor or sensory symptoms along the entire course of the sciatic nerve, or in a very limited area supplied by it. The lumbar vertebrae, five in number, are the largest of the movable vertebrae, the body having a greater diameter transversely than from before backward, with short thick laminae, a spinous process which projects horizontally backward, and slender transverse processes extending directly outward. The articular processes are thick and strong, and their articular surfaces are vertical, the superior, concave, look backward and inward, while the inferior, convex, look forward and outward. The movable vertebrae are joined together by elastic discs between the bodies, by synovial joints between the articular processes, and by strong ligaments. The fifth lumbar vertebra is joined to the first sacral vertebra by anterior and posterior ligaments of the bodies, capsular ligaments of the articular processes, the ligamenta subflava of the arches, supraspinous and interspinous ligaments, and by an intervertebral disc. The lateral lumbo-sacral ligament, and the ilio-lumbar ligament also add to the stability of the lumbo-sacral synchondrosis.

The sacrum, situated just below the last lumbar vertebra and articulating with it, in the adult is the union of five vertebrae. It also articulates laterally with the ilii, forming a complete joint with cartilage, synovial membrane ligaments, and supporting muscles and having slight but real motion of a sliding type. Inferiorly, the sacrum articulates with the coccyx. The ilium, together with the os pubis and ischium form the innominate bone and with its neighbor of the opposite side complete the bony formation of the pelvis.

The line of weight bearing, which passes to the innominate bones through the lumbar vertebrae and sacrum, is not a vertical one, and in the erect posture there is a constant tendency for the fifth lumbar vertebra to sag forward and downward on the sacrum, being prevented normally by muscular and ligamentous action, and by maintaining the normal curves of the spinal column.

The sciatic nerve, the longest and most widely distributed in the human body, originates in the fourth and fifth lumbar roots and the first, second, and third sacral roots, the branches from which form the lumbo-sacral cord, uniting at the level of the sciatic notch. Passing around the ischial spine, it descends in the posterior part of the buttocks between the ischium and great trochanter, to and down the posterior aspect of the thigh, becoming superficial at the upper end of the popliteal space, where it divides into the external popliteal and internal popliteal nerves which supply the motor and sensory regions below the knee. The sacral plexus and its branches before uniting to form the sciatic nerve, lie very close to the lower lumbar spine, the lumbo-sacral articulation and the sacro-iliac synchondrosis.

Congenital variations of the sacrum and fifth lumbar vertebra are quite common. A fifth lumbar vertebra or a first sacral vertebra, normal on one side, may closely resemble the normal first sacral vertebra or fifth lumbar vertebra on the opposite side or the same development variations may be present on both sides, making it difficult to differentiate between the lumbar and sacral types of vertebrae.

Changes of the articular surface in the lumbo-sacral joint or joints, from the normal vertical to a horizontal axis, cause a chronic inflammation, and thus a thickening of the structures supporting those joints.

Occasionally the coalescence of the laminae is not completed, leaving a cleft in the arches of the vertebrae through which there may be a protrusion of the whole or a part of the spinal cord. This malformation is known as spina bifida, and is considered by many to be the most common of all congenital abnormalities of the vertebral column. A very important form is spina bifida occulta, where the laminae have just failed to meet and the membrane over the opening is strong enough to resist the intraspinal pressure. Frequently this form never gives symptoms, but troublesome claw feet, weakness of the lower extremities, and trophic disturbances developed after a few years and are believed to be directly caused by it.

A fifth lumbar vertebra situated abnormally low, especially when one of its transverse processes impinges on the ilium, a wedge-shaped fifth lumbar vertebra causing an abrupt lateral deviation of the lumbar spine with marked rotation or a congenital absence of the sacrum are sources of irritation to the lumbo-sacral cord.

Ryerson reported a case of recurrent spondylolisthesis with paralysis of the spastic type. He says: "It is quite true that it is not easy to constrict the spinal canal at the level of the fifth lumbar vertebra, but it can be done, and I can think of no other method by which this little girl's paraplegia could have been caused." From this it would seem possible to have a forward and downward displacement of the fifth lumbar vertebra on the sacrum sufficient to give pressure symptoms of the sciatic nerve. In nearly every case of true spondylolisthesis, there is a congenital malformation of the fifth lumbar vertebra, usually a non-fusion of the laminae, which makes it more prone to dislocation than that of a normally formed vertebra.

* Presented to Section on Anatomy at the Fifty-second Annual Session of the California Medical Association, San Francisco, June, 1923.

Structural changes of the lumbar spine due to necrosis of the bones and collapse of the bodies of the vertebrae in Pott's disease are rarely the cause of the nerve symptoms. Pressure on the cord and nerve roots from the inflammatory material, mostly granulation tissue and thickened spinal membranes, slowly produces sensory and motor symptoms along the entire course of the sciatic nerve. An abscess, which usually follows the course of the psoas muscle, not only relieves the pressure symptoms, but removes the broken-down granulation tissue and carious bone from the diseased area.

Tumors of the lumbar spine and pelvic region rarely exist without producing symptoms of the sciatic nerve. When the bone is involved structural changes are marked, and nerve tissue is destroyed very rapidly.

Osteoarthritis involving the lower lumbar vertebrae, the lumbo-sacral articulation, or the sacro-iliac joints, is a very common cause of sciatic nerve symptoms. Although the Roentgen ray usually reveals osteophytes varying in size from the minutest roughening to well-developed spurs, or even bony fusion of two or more vertebrae, it occasionally fails to show any abnormality which can be demonstrated by means of the Roentgen ray. Recent literature has reported the presence of osteophytes on the bodies of lumbar vertebrae at autopsy that did not show in clear roentgenograms of the same region taken shortly before death. It is not only the pressure from the osteophytes, but the inflammation which stimulates their growth that irritates the nerve roots. Very minute structural changes may be responsible for severe nerve symptoms.

Traumatic separation of the symphysis pubis, as from a forceps delivery, gives a corresponding twist at one or both sacro-iliac joints, with pressure symptoms of the sciatic nerve. The inflammation resulting from subluxation of the sacro-iliac synchondrosis frequently irritates the sciatic nerve, although all the symptoms may be confined to the region of that joint.

Fracture of the bodies of the lumbar vertebra usually does not affect the sciatic nerve. Rarely an excess of callous impinges on the nerve roots. When the neural arch has been fractured, motor and sensory disturbances of the lower extremities are quite common.

Because of the close proximity of the lumbo-sacral cord to the transverse process of the fifth lumbar vertebra or to the lateral lumbo-sacro articulation, fracture of either usually produces enough callous to cause marked irritation to the sciatic nerve, and occasionally partial or total paralysis. Again, there may be no effect on the sciatic nerve when there was not only complete destruction of the fifth lumbar vertebra, but the transverse processes of all the lumbar vertebrae on one side were fractured and widely separated from the bodies, and the lumbar vertebrae sharply rotated. One month after the accident this patient was allowed to walk without spinal support. Nerve symptoms developed, which disappeared soon after rest in the recumbent position was resumed. Later a Hibbs' spinal fusion bridged the space between the fourth lumbar vertebra and the sacrum and completely stabilized the lumbo-sacral articulation.

As injury to the sciatic nerve from direct pressure or irritation from inflammation near it may produce paralytic, neuritic, neuralgic, and causaligic syndromes, a thorough clinical and X-ray search for structural changes in the lumbar spine and pelvic region should be a routine in every case of sciatic nerve symptoms.

134 South Norton Avenue.

DISCUSSION

Harold H. Hitchcock, M. D. (1906 Franklin Street, Oakland, Calif.)—The vicious habit of standing, as so many people do, with their pelvis tilted forward, their abdominal and gluteal muscles relaxed, and their lumbar lordosis greatly increased, together with anomalies of the articulations between the last lumbar vertebra and the sacrum, as pointed out by Goldthwait, I believe are great factors in making low backs less stable. It has not been my experience to see failure of union of the posterior laminae in spondylolisthesis. The failure of the laminae of the last lumbar vertebra to unite is a very common anomaly, and I believe it a coincidence when seen in spondylolisthesis. The variations in the articular facets are of more importance as a factor predisposing spondylolisthesis.

As in hip disease, referred pain is often felt in the knee, so I believe that much of the sciatic pain seen in patients with low back trouble is referred pain from either a lumbo-sacral or sacro-iliac lesion, and that the sciatic pain is not often caused by direct pressure on the sciatic or the nerve roots composing it.

Henry H. Lissner, M. D. (Brockman Building, Los Angeles)—It is not my intention to belittle the more recent advances made in the study of the causes of backache and sciatic pain, but it is my purpose to call attention to the usual psychological stimulus attendant upon all of the newer developments, in either medicine or surgery, and to warn against an ultra enthusiasm which leads the medical mind into a blind alley. Of course, not every backache, following trauma or otherwise noted, is due to spondylolisthesis; and not every pain in the region of the sciatic nerve or referred along its anatomical distribution is due to disease or inflammation of the nerve itself.

From the diagnostic standpoint we must consider conditions within the nerve, the effects of toxic absorption, and conditions without the nerve, which may cause pressure upon it to produce symptoms referable to it.

Sciatica per se is too well known to discuss in extenso. One point must be considered, namely, if there is localized atrophy of a group of muscles, it is suggestive that there is something more than a simple sciatica or neuritis at work. One must also be satisfied that there is no disease in the hip-joint, pelvis or spinal column which could give rise to symptoms.

Rectal and vaginal examinations should be made to be sure that no pelvic inflammatory or malignant mass is pressing, or that a retroverted uterus is not causing the trouble. Tuberculosis, gumma or malignant disease of the lumbo-sacral vertebra may produce pains resembling sciatica. A careful study of the urine and blood should be made for sugar, since double sciatica is not at all uncommon in diabetes.

Every man should investigate the action of the sphincters and palpate carefully the pelvis and spine, make rectal and vaginal examinations in all patients whose symptoms conform to a sciatic involvement and should have X-ray studies made, both antero-posterior and lateral views, after all other conditions have been excluded from the diagnostic standpoint.

Finally, don't let the X-ray examination be the

first step toward the diagnosis of conditions involving the lumbar and pelvic regions.

Maynard C. Harding, M. D. (Timken Building, San Diego)—Doctor Chappel has given us a surprising amount of information in a very condensed and understandable form. I wish to comment on only two points. The first is, why should injuries to the lumbo-sacral and sacro-iliac joints give pain in the sciatic distribution? In the first place, the typical radiation of sacro-iliac pain is down the back of the thigh to, the popliteal space. This is the skin distribution of the small sciatic nerve, not of the great. It is inconceivable to me that the very slight gross movement which takes place in the ordinary sacro-iliac subluxation can cause actual damage by pressure or stretch. We must look for the origin of the nerve supply for explanation.

The sacro-iliac joint is supplied by twigs from the superior gluteal nerve, which arises from the fourth and fifth lumbar and first sacral nerves. Also by unnamed twigs of the sacral plexus arising at the same level. It receives another innervation from the primary posterior branches of the first and second sacral nerves. The skin covering this area is usually a seat of pain in sacro-iliac conditions, and is also supplied by the same primary posterior branches. The small sciatic arises from the posterior cords of the second and third sacral nerves. I believe it is this close segmental relation of these nerves which accounts for the distribution of pain.

My other point concerns the differential diagnosis between sciatic pain from sacro-iliac injury, and from toxemia, and inflammation.

In sacro-iliac slip the pain comes suddenly, it may go suddenly, or persist as a soreness a day or more after relief of the cause. There is rarely localized tenderness along the nerve, and never severe. There may or may not be a positive Kernig. In toxic pain, the pain comes more gradually. It pains in all postures. It is not relieved suddenly. Tenderness is moderate. There is usually a Kernig. In true inflammation the onset is gradual, and the relief is gradual. There is pain in all postures. Tenderness is marked, and the Kernig is marked and very painful.

Doctor Chappel (closing)—Since a discussion of all the causes for low back pains and sciatica would open up the whole realm of medicine and surgery, and as I fully appreciated that many conditions, aside from structural changes in the lumbar spine and pelvic region, may cause irritation to the sciatic nerve, I purposely limited the contents of this paper to causes which are frequently overlooked when determining the etiology and outlining the treatment for sciatica.

Standardizing Reform—We should say that the trouble with the hygienists is that they are obsessed with the idea of standardizing the people with respect to keeping well.

It is one thing to reform rigorously our spelling and set up correct and fixed orthographic standards, but when it comes to reforming human beings it should be borne in mind that some folk ought to be beguiled into what would be sinful and damaging for others.

But alas! the professional reformer can never be induced to see problems from such an angle.

We are today so much in the hands of narrow propagandists of all kinds that there is absolutely no chance of rational procedure. Therefore, any further material reduction of our mortality rate, much as we should wish to see it, is hardly to be looked forward to with any assurance. If it does come about, it will be because of more or less fortuitous determinants.—Editorial, The Medical Times, November, 1923.

TRAUMATIC SYNOVITIS OF THE KNEE, ACUTE AND CHRONIC*

(A Review of the Literature.)

By RUDOLPH L. DRESEL, M. D., San Francisco

In this paper I have tried to limit myself to the purely traumatic affections of the knee-joint, not those due to disease such as tuberculosis, hemophilia, or infectious arthritis, or those due to strain, such as so-called villous arthritis, which might influence the existing lesion.

Anatomy—The knee-joint is a hinge-joint, with some slight degree of ant-posterior motion as well as some slight rotation. It depends for its strength on its ligaments and on its muscles. It has two articulations, femoral-tibial and femoral-patellar. There is a capsule thickest behind and thin at the lateral aspects of the patella. There is an external and internal lateral ligament and two crucial ligaments. The tendon of the biceps strengthens the outside of the joint and reinforces the external lateral ligament. The ligament is separate from the capsule except behind, and it is separate from the external semi-lunar cartilage by the tendon of the popliteus muscle, and a bursa. The capsule mingles with the periosteum, reaches in front as the quadriceps pouch around as high as the lateral tuberosities, and in back one cm. above the cartilage covering the condyles, attached around the articular surface of the patella and down slightly on the sides of the tibia. On each side there are strong bands running from the condyles to the patella, the vasti and the fascia lata. The heads of the gastrocnemius, and some fibers of the tendon of the semimembranosus help to strengthen the capsule. The internal lateral ligament is very closely attached to the capsule and only artificially separated from it. The vastus internus fibers are inserted low enough on the internal capsule to cause in certain positions of the knee-joint, and under certain conditions of muscular contraction, a distortion of the internal capsule and the semi-lunar cartilage attached to it.

In traumatic affections of the knee-joint it is important to keep in mind the difference between the internal lateral ligament and the external, and the difference between the internal semi-lunar and the external, which maks considerable difference in the susceptibility for injury to the joint.

The external semi-lunar joins at its posterior horn to the posterior crucial ligament. There is no more than one centimeter between the two horns. The coronary ligament connects the cartilage to the tibia, it is not very strong and allows some motion, that on the outer semi-lunar being 2 centimeters in front and 2.5 centimeters in the back, thus allowing fairly free motion. The popliteus muscle separates the cartilage from the external lateral ligament.

The internal semi-lunar is C-shaped and has no definite attachment in front. It is sometimes free and at other times it is attached to the rough sides of the tibia at no particular point. The peripheral border of the internal semi-lunar is attached to the internal lateral ligament, the posterior horn is at-

* Presented to the Section on Orthopedic Surgery at the Fifty-second Annual Meeting of the California Medical Association, San Francisco, June, 1923.

tached to the tibial facet of the spine, the coronary ligament is short, not more than 0.5 cm. long (Piersol).

The crucial ligaments are the strongest in the knee, the anterior arises just in front of the spine close to the external semi-lunar, running backward, upward and outward to the back of the inner side of the external condyle. The posterior crucial is the stronger, arises from the back of the groove of the tibia at the posterior aspect and passes forward and upward to the inner side of the internal condyle. This leaves the spine free and covered by synovial membrane.

The posterior ligament of the ligament of Winslow is an especially thickened portion of the capsule which helps only preventing hyperextension of the joint. It is directed upward and outward to the inner border of the external condyle, and is joined by an expansion from the insertion of the semi-membranosus.

The synovial membrane is closely connected with the capsule, separated only by a layer of fat or fat-pads. Of these the most important are: The subpatella, extrasynovial but intracapsular, about the front and top of the tibia. This pad stretches out on either side as the alar ligaments reaching to the semi-lunar cartilages. The ligamentum mucosum, of small importance, runs from the patella to the top of the intracondylar notch. The joint is freely connected with the quadriceps-pouch and less freely with the popliteal-pouch because of the crucials and the fat-pads.

There is a bursa under the patella tendon, which practically never communicates with the joint. Laterally, there is a bursa between the external lateral ligament and the tendon of the popliteus, and another between the ligament and the tendon of the biceps. This bursa generally connects with the joint. In back there is a large bursa beneath the inner head of the gastrocnemius, and this sometimes connects with the joint later in life.

Mechanism—The tibia normally is rotated outward to a slight extent in extension. Further rotation outward is resisted by the internal lateral ligament, probably not the crucials to any extent. Inward rotation is resisted by the external lateral ligament and the anterior crucial. Adduction is limited by the external lateral ligament and the posterior crucial. Abduction is limited in the fully extended position by the internal lateral ligament; in flexion by the internal lateral ligament and the anterior crucial. The anterior crucial is quite tense in extension; the posterior in flexion. In other words, the posterior crucial prevents displacement of the femur on the tibia, when as in alighting from a leap, the whole weight is carried forward, the knee being flexed. The greatest help in the stability of the knee, and over which we have more or less control, is the tone of the quadriceps muscle and its expansions. Thus, there may be injury to the internal lateral ligament, and in further abduction the anterior crucial may be torn. A displacement of the internal semi-lunar cannot be unless the internal lateral ligament is stretched or ruptured. If the internal lateral ligament is torn above the joint the cartilage remains intact on the tibia; if the ligament is torn below the level of the joint, the cartilage will be torn upward and will follow the rotatory motion of the femur. The cartilage becomes displaced, and as the articular surfaces of the joint become separated the cartilage will slip inward and become nipped as the separated bones come together again. It is for this reason that Jones makes the statement that the strength of the knee-joint is proportionate to the strength of the internal lateral ligament. To quote from Edwards of Glasgow, "medial rotation of the tibia on the femur is limited by the tortion of the crucial ligaments, and at its limit by the tensity of the lateral ligament; whereas, external rotation is not opposed by the crucial ligaments, thus supporting the view suggested that the lateral ligaments are the most important group in maintaining stability of the knee.

Pathology—Effusion may occur as a result of a sprain of the internal lateral ligament with or without cartilage displacement. It may be due to damage to the synovial membrane by direct violence with or without ligamentous damage. But the external, lateral ligament is rarely torn, and external cartilage displacement is rare because of its freedom and because of the separation of the ligament by the popliteus muscle.

E. Nichols, in his report on football injuries (1915), had many cases of synovitis of the knee mostly due to twist when legs were caught in a pile. He says, "In many cases it is an index of serious joint injury; in other cases it seems to result from a simple twist. In the cases of simple synovitis, in no cases since 1910 has the knee been fixed in plaster or on a ham-splint. First he uses a long, hot soak and then a compression bandage, this is removed at bedtime, and the knee soaked again and the bandage reapplied. Baking the joint is begun the next day and as soon as the effusion has reached its maximum massage is begun. Most cases of simple effusion without ligamentous damage are able to begin practice on the tenth day. A persistence of the effusion in almost every case is an indication of serious joint trouble.

In cases of semi-lunar cartilage there is invariably a pretty violent acute synovitis. Many, although not all, show an immediate locking of the joint. The subsequent disability varies a great deal, depending apparently upon the position of the torn end of the cartilage. Some players after such an injury may play half a season before there is a recurrence. Other men directly after the injury are troubled with constantly recurring locking of the joint. The semi-lunars were reduced after the Jones method, and fixed by a single strapping over a pad at the internal anterior portion of the joint. This was found better than any apparatus or cross-strapping.

A man with a semi-lunar cartilage displacement was often allowed to play, but he never was a reliable player thereafter. Nichols found ten semi-lunars in 145 knee injuries due to football.

Major Harding, U. S. A., studied seventy cases of acute synovitis of the knee, traumatic, at a camp in the State of Washington. He grouped them as follows: (a) General strain, 40 per cent; (b) In-

ternal lateral ligament, 43 per cent; (c) Internal semi-lunar, 32 per cent; (d) External lateral ligament, 1 case; (e) Periosteal tear, femur, 3 cases; (f) Cracks in the patella, 3 cases.

Internal lateral ligament and semi-lunar cartilage injuries were the most common combinations. Twenty per cent gave a history of previous injury. All cases had effusion and all cases were aspirated. Eighty-seven per cent had bloody fluid, ranging from blood-stained to bloody fluid clotting on exposure. The amount obtained was from 20 to 120 cc., averaging 63 cc. All were cultured and all cultures were negative. All X-rays except three were negative. These three showed cracks in the patella, and three showed what he interpreted as thickened alar ligaments.

In this connection Salmond, in the British Journal of Surgery, 1919, speaks of the occasional unrecognized fractures of the patella border, mostly situated at the outer border of the bone. Generally due to slight trauma, such as a twist from overstepping the curb, very probably due to muscle action. Mostly, the injury was so slight that the patient overlooked it at the time, and came later with the diagnosis of chronic synovitis or arthritis.

In Harding's cases those aspirated had pain averaging one and one-half days; those not aspirated eleven days. He believes the stretching due to the fluid which causes the stretching of the capsule to be a prominent cause of disability and cause of slow recovery. All the cases were baked and when the soreness was gone, massaged, and gotten on their feet and ordered to wear a flannel bandage for about three months. Before they were discharged they were ordered out on walks increasingly long, and if at the end of that time they could walk five miles without recurrence they were discharged.

Mauk (Virginia Medical Journal), in speaking of chronic knee-strain, says that the usual treatment of bandage and bed is the cause of most of the trouble. He believes that in any synovitis the internal lateral ligament is always injured. He uses a tight bandage and a posterior cast for three or four weeks, with a daily massage after three or four days. Later a knee-cage, not a compression bandage.

In a paper in the 1921 Surgery, Gyn. and Ob., Metcalfe, speaking from his army experience at Fort Sam Houston, says he has given up the old approved method of treatment; i. e., rest in bed, compression bandage, heat, and massage.

This method resulted in three to six weeks' treatment with ofttimes recurrence of the effusion as soon as the soldier was returned to duty. Often their complaint was bitter enough that it was necessary to discharge them from the service. Starting in 1916, he aspirated all knee-joints and put the knees up in traction and in extension. During 1916 he aspirated 150 knees and extended them, and with few exceptions the joints became normal and the men ready for work in less than two weeks. It was observed that a knee aspirated immediately showed practically free blood, and in six days bloody serum and in ten days straw-colored serum. In one patient only did he open the knee-joint and express more than twenty loose bodies resembling cartilage and varying in size from a dime to a silver dollar. Examination showed this substance to be fibrin. This patient made a complete recovery after the removal of the particles. Since a knee aspirated immediately showed almost free blood, it was his practice to aspirate after forty-eight hours.

In more than 300 cases treated he withdrew 60 to 100 cc. of bright blood or bloody fluid. Extension was removed after ten days, and the patient was allowed up and allowed to start walking. Return to duty usually occurred after three weeks, and was rarely followed by recurrence. These conclusions are very similar to those obtained by Major Harding. Metcalfe lays great stress on the damage done by the stretching by the fluid and the deposit of fibrin. "Continuous stretching makes for chronic effusion."

Bennet analyzed 750 cases of synovitis of the knee, and found them in the following proportions: Internal derangements, 428; bodies, 24; genu valgum, 4. The rest were due to disease. Bennet agrees that the semi-lunar cartilage, if fractured, is generally torn longitudinally near its attachment to the internal lateral ligament in the middle three-fifths, is left attached at the anterior and posterior one-fifth and the loop thus formed lies in the intercondylar notch. He calls this the bucket-handle type, and claims this to be the most common type of injury.

C. F. Painter, in the U. S. Navy Bulletin, says that the most severe injuries occur in early and in late adolescence. Of these the following are the most common: Internal semi-lunar cartilage; hypertrophied alar ligaments; occasional traumatic bursitis (under biceps tendon). He classes the semi-lunar injuries into two groups—those in which the ligamentous attachments between the tibia and the face of the semi-lunar is torn away and the cartilage becomes mobile enough to permit of catching in the joint, but seldom locking. Second, those, besides having the ligament torn away, the cartilage is fractured. The result is that the free edge of the cartilage flaps in and out of the normal position, and may be detached from its anterior ligamentous attachment for an inch or an inch and one-half. Mostly, the break is at the same place of the junction of the inner and outer third. Continued long enough, this also causes thickening of the synovia and the alar ligaments.

Fractures of the epicondyles may give, clinically, the picture of a ruptured ligament, lateral. There is apt to be sharp synovitis. Good results, except in the formation of joint mice as pointed out by Codman, and these may produce and maintain chronic synovitis.

Diagnosis of hypertrophied alar ligaments is made if after a trauma to the front of the knee there is continuous local swelling on either side of the patella and slightly below it. There is considerable pain or ache in the joint, especially after standing or walking a while.

J. Dubs, in the British Medical Journal, calls attention to the X-ray shadow between the patella and the tibia-femoral joint, found very often in this condition. There is usually marked atrophy of the

quadriceps, with slight grating in the joint on active or passive motion. When the trouble is marked there is often a sensation of pinching in the joint, but the carrying out of the motions is not prevented. In chronic cases there may be an inability to fully extend the joint, but there is no locking or pain. Operative treatment indicated in the chronically irritated ones.

Bicipital bursitis is rare and is purely a traumatic affair. It is due to a strain on the biceps muscle combined with the fact that there is a minute communication between this bursa and the knee-joint. Usually presents as a small tumor beneath the biceps about one-half inch above its insertion into the fibula. Symptoms are pain and tenderness, patients usually limp a good bit. Operative removal indicated as a rule.

FRACTURE OF THE TIBIAL SPINE AND RUPTURE OF THE CRUCIAL LIGAMENTS

Rupture of the Crucial Ligaments—This is a relatively rare condition, always due to an injury of a grave and spectacular nature, caused by a severe direct injury, knee flexed, tibia markedly abducted and rotated inward. The fibers of the internal, lateral ligament are practically always ruptured also. And if the twist is beyond a certain point the spine of the tibia may be fractured either entire or the internal tubercle. The posterior crucial always invariably escapes except in such injuries which are connected with dislocation of the knee. In this connection, one must keep in mind the connection between the internal lateral ligament and the internal semi-lunar cartilage; for instance, should the forces which rupture the cartilage continue to produce further abduction of the knee, the entire strain is borne by the anterior crucial ligament, and later the strain falls on the tibial spine which in its turn may become fractured. Often after operations on the semi-lunar, as Sir Robert Jones has pointed out, the result is not satisfactory probably because there was an injury to the internal lateral ligament and the crucial ligament as well. There has been much discussion and a variety of opinion as to the treatment of this condition. Hey Groves advocates operative intervention in all cases. He has devised a special "tunneling" operation described in the British Surgical Journal 7:505, 1915. But most writers on this subject, especially more recently, do not agree with him. Cotton, Kurlander, Sever, F. Jones, Mayo-Robsen, and Bennet all agree that rupture of the crucial ligament is not so serious as at one time it was credited with being. Very serviceable joints may be expected after injuries of this kind, and the operative methods employed may be counted upon to restabilize the joints with very little surgical risk. It does not seem to them that in the majority of instances the tunneling operations and the transference of muscles or transplants of fascia are necessary. Cotton has operated several cases of this sort in ex-soldiers and has devoted his attention to the repair of the lateral ligaments, especially the internal lateral ligament. Sir Robert Jones, speaking of the Hey-Groves operation, says: "From the mechanical standpoint I think the Hey-Groves operation is incomplete, in that it does not attempt to strengthen the internal lateral ligament. The new fascial ligament has to bear the entire strain in both abduction of the knee and in anterior sliding of the tibia, as well as in the internal rotation of the tibia on the femur. He has modified the operation and reconstructs the internal lateral ligament as well.

All the recent writers agree that a ruptured crucial ligament, when so diagnosed, should be treated by immobilization for a period of at least two months, and this is considered preferable to primary suture. It is best to immobilize in about thirty degrees flexion (thus keeping all torn structures relaxed during healing). Later, they can either be fitted with a knee-cage or, if found necessary, some stabilizing operation can be attempted.

Henderson in the last number of the Archives of Surgery sums up his experience with ruptured crucial ligaments as follows: "In my experience ruptured crucial ligaments have never been the cause of significant chronic mechanical trouble in the knee-joint. Probably the ligament unite and afford stability, or patients are able to get along without them."

In cases of fracture of the tibial spine conservative treatment with the knee in extension or nearly complete extension is indicated; operative treatment is not indicated. Sir Robert Jones recommends that the knee be kept immobilized for at least ten weeks. If later, or in older cases, there is trouble because of excessive callus, this can be removed at operation. Sir Robert Jones cites several such cases in detail.

Posterior crucial ligament tears are exceedingly rare, and the treatment is along the same lines as the anterior crucial tears.

Fractures into the joint give generally fair, sharp synovitis. They are generally caused by direct trauma and involve either the femoral condyles or the internal or external tuberosities of the tibia. If there is much displacement, these patients generally have much arthritic pain afterward; it is, therefore, usually best to cut down upon, and replace the fracture. If there is slight displacement, on the other hand, the results without operation are good, especially if a Thomas splint with a knee flexion bar is used at the end of two or three weeks so as to mobilize the knee. Fractures of the patella and dislocation of the patella, although causing synovitis, does not come under the scope of this paper.

Other causes of purely traumatic synovitis are few in number. They are caused either by trauma or by trauma plus some constitutional disease or from disease alone thought to have been caused by trauma. The most common of these are the loose bodies, i. e., osteochondritis dissecans; hypertrophic arthritis with fracture of hypertrophic spurs and osteochondromatosis. Osteochondritis may or may not be due to trauma; there seems to be considerable divergence of opinion as to that. The articular surfaces of the knee are peculiarly brittle in this affection, and it has been noticed that very frequently the condition is found in both knees. Further, Henderson, Freiburg, and others have called attention to the fact that, in practically all cases the loose body or bodies, seldom more than two or

three, arise from the internal condyle of the femur, always practically in the same place. These facts make it very improbable that the condition is due to trauma. But, of course, the knee-joint is so exposed and so subject to trauma that a history of trauma is almost always given, no matter what the condition.

Fracture of hypertrophic spurs usually give little trouble in diagnosis, and it is only necessary to remember that a hypertrophic joint is very apt to flare up after operative interference, and is also easily infected if opened. So that often, unless there is very definite locking, it is wiser to leave the joint alone and not attempt to remove the loose bodies.

Osteochondromatosis is a condition little understood. There is usually no definite history of trauma. The number of loose bodies are usually quite large, twenty or thirty, or even sixty or seventy. According to Whitelock and Henderson, this condition is probably a developmental aberration due to a misplacement of some of the original cells of the meso-derm, which take on properties later in life not familiar to the normal cells in that situation, but produce cartilage and bone. At any rate, such a knee is subject to frequent recurrent synovitis at the least provocation, and such loose bodies should be removed. It is well to remember that these bodies often lodge posteriorly in the joint, and cannot be reached by the ordinary incision. In approaching the posterior compartment of the joint there are two incisions of choice—the posterior incision devised by Osgood (inner side of vessels above popliteus muscle), and the anterior-posterior incision of Henderson (S G O 33-698, 1921).

Congenital syphilis may give a chronic or recurrent synovitis of the knee-joint, but this is usually symmetrical and in practically all proven cases associated with eye, bone or other pathology. This condition ought not to be a cause of mistaken diagnosis. In the acquired form there is seldom synovitis; if so there may be some synovitis due as far as can be ascertained to syphilitic bone infection at or near the joint, and if these things are not present ought not to affect a traumatic synovitis.

I have carefully read the literature on endocrinology to see if there was any mention of an acute or chronic synovitis of the knee, which might in some way obscure the diagnosis, but can find no mention of any such condition. Bennet of Johns Hopkins and some German writers speak of having observed that occasionally menstrual derangements, if irregular, and especially if delayed at onset, may cause passive effusion into the joint. This is obviously not due to trauma nor ought it to materially affect the course of a traumatic synovitis.

SUMMARY

It is important to bear in mind the intimate relation of the internal semi-lunar cartilage and the internal lateral ligament; also, the relation of both of these structures to the internal crucial ligament.

Furthermore, it is important to remember that the tone of the quadriceps muscle has much to do with the stability of the joint. It is very necessary, as far as it is possible, to keep up the tone of this muscle during treatment.

There seems to be some difference of opinion as to the treatment of acute synovitis. Most writers are dissatisfied with the ordinary methods used, and advise more active treatment such as early aspiration of all cases of severe synovitis, as well as better fixation during the first period while recumbent and more prolonged treatment afterward during convalescence, as well as early and increasing massage and motion without undue strain.

It is very probable, also, that in such cases of knee injury with considerable internal damage accompanied by marked synovitis, the continuation of the synovitis is due to the original severe capsular stretching and not to any latent syphilitic infection or other chronic systemic disease as is so often thought. We are often prone to attribute the cause of these persistent synovitis to a syphilitic infection, even in the presence of a negative Wassermann and the absence of all other signs of syphilis.

It would appear that crucial ligament injuries are not as disabling as has been thought heretofore, and that the damage to the lateral ligaments, especially the internal lateral ligament is the most important thing in this type of injury.

In all cases of fracture into the knee-joint it is important to start early knee motion while the fracture is uniting. This is best done by the use of the Thomas splint with a knee flexion bar.

(177 Post Street.)

DISCUSSION

George Rothganger, 4501 San Pablo Avenue, Oakland—I regard the views of Harding and of Metcalfe on traumataic effusions into the knee-joint as valuable. The practice of early aspiration in such effusions has been his for a number of years. Whatever contributes to the dissemination of this measure, as Dr. Dresel's abstract, aids that much in reducing the number of knee-joints that are permanently injured by the distension of fluid.

The separation of injuries of the semi-lunar cartilage into those with tibial attachments torn and those with fracture of the cartilage is sound for therapeutic reasons. In the latter, removal of the cartilage is the one solution of the injury.

Statements belittling the seriousness of rupture of a crucial ligament are not to be taken too literally. As it is always associated with other injuries because of the extreme violence producing it, and as these injuries when alone may have a satisfactory recovery, the disability must be due to the ruptured crucial ligament.

Ellis Jones, Brockman Building, Los Angeles—Dresel has admirably reviewed the etiology and treatment of traumatic synovitis of the knee-joint. The need of early aspiration of the acute knee-joint cannot be overemphasized; relief of symptoms is usually immediate.

We have not found it necessary to apply fixation apparatus following a simple strain of the internal lateral ligament. A canton flannel bandage or a compression bandage has seemed sufficient, and the heel of the shoe is raised three-eighths of an inch on the inner side to deflect the strain to the uninjured external lateral ligament.

A common sequel to a simple traumatic synovitis is a relaxed and mechanically inefficient quadriceps. Treatment with the Bristow coil will restore the muscle tone more quickly than any other device.

Whereas formerly we were content with massage and relative fixation to produce a capable quadriceps in from four to six weeks after injury, we now find the quadriceps restored within ten days of treatment with the Bristow coil.

The knee-joint is as secretive as the abdomen and it is wise not to be too positive in our diagnosis at a single examination. A badly swollen knee does not permit of the most accurate diagnosis, and our first duty is to relieve the patient, get rid of the effusion by aspiration, and a subsequent examination after aspiration may often give us very reliable information impossible to obtain previously. It is well to remember that, while injuries to the external semi-lunar cartilage are rare, yet when they do occur they may refer the symptoms to the internal aspect of the joint. We have removed two external semi-lunar cartilages, almost entirely detached, in a patient whose subjective symptoms were referred entirely to the inner aspect of the joint.

A common, unrecognized injury is a pinched retropatellar pad. Examination of both knees in a flexed position will show a thickened retropatellar pad and a simple synovitis. Extension exaggerates symptoms and it is often impossible for the patient to voluntarily extend the knee. This inability to extend the knee is often wrongly interpreted as "locking," due to an injury to the meniscus. In the presence of considerable effusion aspiration is indicated and the knee-joint should be fixed in a walking cast in twenty degrees of flexion and with a one-half inch lift in the heel of the shoe. The cast is worn for ten days, at which time the pad is usually found of normal size and the knee-joint symptomless. It is this type of injury which is most common in patients with a mild hypertrophic osteoarthritis, in which the retropatellar pad is always somewhat enlarged and, therefore, subject to injury. Untreated or improperly treated, a simple injury of this type, especially in the presence of a low grade infectious arthritis, leads to synovial hypertrophy, which in turn becomes aggravated by further minor trauma.

A bad twist to the knee may also produce a mild but definite posterior subluxation, hardly apparent to the examining eye. Pain on forced extension referred indefinitely to the hamstrings and instability in walking, a mild effusion without a definite area of tenderness should make us suspicious. Lateral radiographs of both knees confirm the diagnosis. Reduction is best accomplished by forced flexion and counter-attraction under an anesthetic followed by plaster fixation in 30 degrees of flexion.

Beriberi and Rice Neuritis—I think it is proper to conclude that beriberi must be distinguished from rice disease, while a condition which is similar to rice disease may also be found in human beings in Chichiko dyspepsia.

I dare not, however, say that beriberi has nothing to do with a rice diet or with vitamin deficiency in food. It is quite probable that the eating of rice as the main diet may in itself contribute a factor to the occurrence of beriberi, and administering vitamin B may produce good results in preventing or curing beriberi. Therefore, the close connection between beriberi and rice-eating or vitamin deficiency is beyond doubt, and it is evident that rice disease is in itself an avitaminosis; but I wish to emphasize that I cannot agree with the opinion that human beriberi is altogether one and the same with rice disease, as observed in experimental animals.

The real cause of beriberi can probably be explained by admitting one or more factors to the etiologic agents of rice disease in animals. And the determination of this factor will be the most important subject of further investigations in the problems of beriberi.—Mataro Nagayo, M. D., Journal A. M. A., October 27, 1923.

REPORT OF A CASE OF TORULA INFECTION *

By MONA E. BETTIN, M. D., Los Angeles

The torula is a wild yeast and differs from the saccharomyces or tame yeast, in that it neither forms spores nor ferments sugars. It does not produce mycelium either in cultures or tissues. It seems to have a predilection for the central nervous system and does not cause a generalized infection. It destroys tissue by its growth and does not cause a marked inflammatory reaction as is caused by the blastomyces and coccidioides. The coccidioides immitis is much larger than the torula, reproduces by sporulation and on culture shows mycelium, usually affecting joints first and then becoming generalized, with abscess formation in all lesions, usually resulting fatally. The blastomyces reproduces by budding, but on culture also shows mycelium. This organism causes a generalized infection or may affect the skin alone, but there is usually typical tubercle formation, and patients may recover.

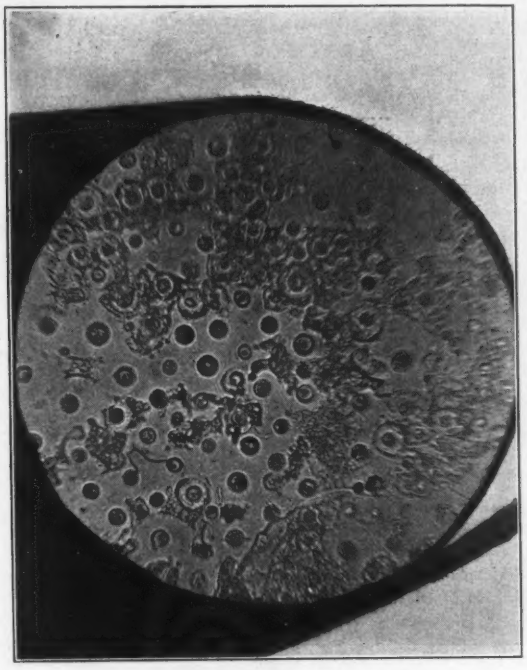
The first cases of torula infection in human beings were reported by Stoddard and Cutler of the Rockefeller Institute in 1916. They had two cases, and found four others in the literature. Since then Pierson of San Francisco reported one in 1917, and Evans of Loma Linda reported two in 1922. The patient whose case is now being reported was ill over a period of several months with symptoms resembling those of encephalitis. The spinal fluid, however, showed numerous yeast-like organisms which proved to belong to the torula group. A chronic meningitis was found at autopsy with lesions in the optic thalami and an abscess at the base of the right lung.

The case report of George G. Hunter follows:

This woman was a nurse, about 40 years of age, single, with a history of previous general good health except for gall-bladder infection with operation about one and one-half years previously. The family history is excellent. Father died at 90; the mother at 70 of pernicious anemia. The patient was the fifth of eight children, one having died of tuberculosis at 50, one after an appendix operation; the others are in good health.

The patient was first seen December 18, 1922, and at that time was complaining of excruciating generalized headaches which had been constant and increasing in intensity for a month or six weeks. Of late there has been some nausea and vomiting, but no other subjective neurological symptoms. During the summer of 1922 she went from Los Angeles to her home in Canada, where for several months she experienced periodic recurring severe headaches, something new for her, and also during that time had for a while a discharging ear. Her family noticed during this period that she was very nervous, whereas she had previously been a very placid woman. In October, 1922, she returned to California in fairly good health, the headaches having abated, but shortly thereafter they recurred and were continuous. During the latter part of November and early December she had been under the observation of a careful physician, who had found in her blood, urine, cardio-vascular-renal system, and in the examination of her sinuses nothing to account for her headaches. There had been no temperature during this time and no increase in her

* Presented to the Section on Pathology and Bacteriology at the Fifty-second Annual Session of the California Medical Association, San Francisco.



Brain.

leucocytes. Up until a few days prior to my visit of December 18 she had been caring for herself, was up and about, and did not look upon her condition as a serious one.

Examination at this time revealed a very stiff neck, painful upon rotation or attempted flexion. There was a moderately developed Kernig sign. The deep and superficial reflexes were slightly increased; pupils were midwide, active to light and distance; skin slightly hypersensitive, and the extremity muscles were tender to firm pressure. There was no clonus and no Babinski and no history of sphincter disturbances or cranial nerve involvement. There was a temperature of 99.4, pulse of 88, this being the first record of a temperature above normal. Her mental condition was entirely normal except that she seemed a little drowsy and dull. An examination of the fundi was negative except for perhaps an unusual fullness in the veins.

On December 19 a lumbar puncture was made which revealed a clear fluid under considerable pressure. There were no acid-fast organisms; the Wassermann test was negative.

Upon the findings to date we were of the opinion that the case was either an encephalitis or a tuberculous meningitis, with the former diagnosis the most probable.

The patient was removed to a sanitarium, where for a few days her condition grew distinctly worse. The headaches became more intense, there was considerable nausea and vomiting, and the temperature ranged between 98 and 102. There was very extreme sensitiveness of the skin and in the body generally to movement. About the 25th there appeared to be a remission, temperature returned to normal, she became more comfortable and mentally clear, and it seemed as though convalescence was beginning. This condition continued for a few days, but soon a relapse with recurrence of all her previous troubles occurred, with a good deal of mental confusion and clouding, and at times a very active delirium. At this time she could be roused out of her mental condition and her intelligent attention held for quite a period of time. Her temperature was very irregular, often being higher in the morning than in the afternoon, but never exceeding 101 during this time.

On January 10 she complained of a cloud obstructing her vision, and a moderate neuro-retinitis was observed. The visual difficulty fluctuated for a few days, but very soon she became entirely unable to distinguish light, without, however, any marked change in the fundus of either eye. After the 10th of January her mental condition was such that very little co-operation was obtainable. Lumbar puncture was attempted on two occasions, but due to the intense spasm of the lumbar muscles and the hyperextension of the spine, both were unsuccessful. A general condition of extreme sensitiveness persisted until about a week before her death, which occurred on January 24. At this time her stupor had developed to the degree where complete relaxation with loss of reflexes made it possible to do a successful lumbar puncture, and it was at this time that the true nature of her infection was revealed. Her physical examination so far as the heart and lungs were concerned had been entirely negative throughout until late in the disease, when there appeared dulness with many crepitant rales at both bases posteriorly, which we assumed to be a secondary hypostasis. She had complained of an unusual amount of pain in her lower left chest about the middle of January just before continuous mental stupor developed. There had at no time been any evidence of distinct localization in her neurological symptoms, but rather one of a generalized irritative nature. The fluid drawn just before her death was distinctly opaque, rather whitish in color, with evidence of marked suspension of some foreign substance which proved on examination to be yeast. Fortunately a complete autopsy was obtained.

Although the findings were quite in accord with those found in other cases of yeast infection, the true diagnosis might easily have escaped notice except for the discovery of the torula in the spinal fluid late in the course of her illness.

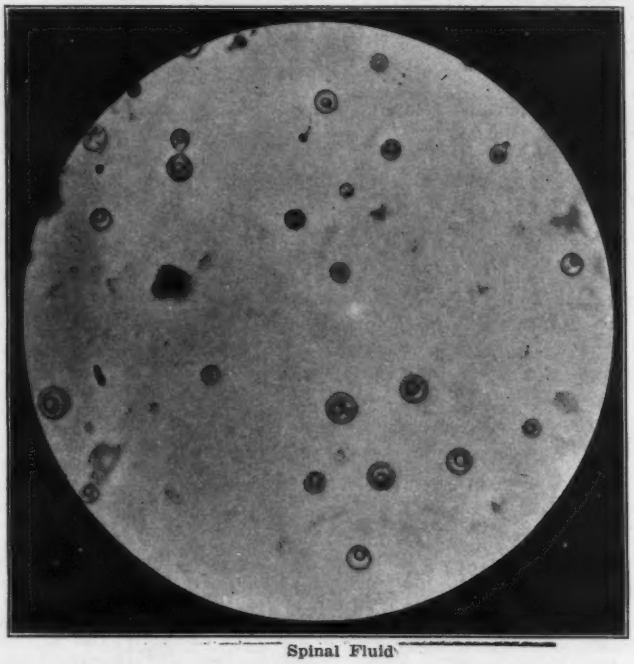
LABORATORY FINDINGS

Examination of the spinal fluid obtained from lumbar puncture December 19 showed 146 cells per cmm.—practically all small mononuclears; globulin test positive; Wassermann test negative, with 1 cc. fluid. No organisms were found in smears, and cultures were negative. The blood count was practically normal. Urinalysis was negative. The second specimen of spinal fluid was obtained January 17, about a week before the patient died. This fluid was cloudy, with a whitish granular precipitate. There was no web formation and no tendency to any agglutination of the particles. Examination showed 64 cells per cmm., with 960 torulae per cmm.; globulin test positive. Cultures on glucose agar showed heavy whitish growth at end of 48 hours; this turned a distinct yellow as it became older. There was no mycelial growth such as occurs in cultures of coccidioides and blastomyces. Intraperitoneal inoculation of guinea pigs was made with this fluid, and the torulae were recovered from fine pin-point blisters on the peritoneal surface. No lesions were found in their brains.

AUTOPSY FINDINGS

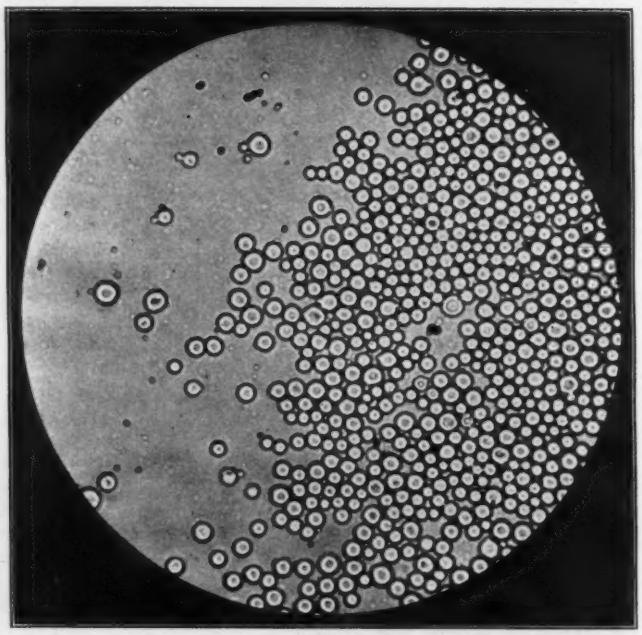
Embalmed body of fairly well-nourished woman. Skin surface negative; subcutaneous and retroperitoneal fat abundant—this seemed remarkable in such a prolonged illness. The peritoneal cavity showed no excess of fluid; the peritoneum was smooth. The liver, spleen, pancreas, suprarenals,

and gastro-intestinal tract were negative; kidneys showed cloudy swelling. There was a small nodule on the anterior wall of the uterus, which on microscopic examination proved to be a fibromyoma. Otherwise, the uterus was negative. Tubes and ovaries negative. Pericardium negative. Heart negative, with exception of mitral value, which showed slight thickening along edge of leaflets. Microscopic examination showed this to be made up of a deposit of leucocytes and fibrin. No torulae were found in these sections. Left pleural cavity negative; right obliterated at base. The lower lobes of both lungs showed hypostatic pneumonia. There were dense adhesions between the base of the right lung and the diaphragm. The lung was inadvertently ruptured in trying to get it out, and showed a cavity about 7½ cm. in diameter. This was filled with a gelatinous-like sticky substance. There was no marked zone of inflammatory reaction around this lesion. No other nodules were found in the lungs.



Spinal Fluid

The brain was of normal size. The dura was markedly adherent. All convolutions were flattened and the pia was markedly thickened, especially in the sulci. When the meninges were pulled off the brain, numerous shallow pits of pin-head size and smaller were noticed over the surface of the convolutions. The lateral ventricles were not dilated. The ependyma and choroid plexus appeared negative. The ventricular fluid was cloudy and on microscopic examination showed numerous yeast-like organisms. Serial sections of the brain were made in the frontal plane after it had been thoroughly hardened, and showed nothing until the region of the optic thalamus was reached. Here the grey matter of the thalami seemed to be replaced by gelatinous masses made up of spaces connected by delicate threads, giving a honeycombed appearance. There was no inflammatory reaction and no caseation. The fourth ventricle was almost filled by an exudate which seemed to extend into the brain substance. This was especially marked over the roof in the region of the corpora quadrigemina, where there was dense fibrous tissue with calcareous deposits.



Culture.

Microscopic examination of sections made from the lung lesions showed the alveoli near edge of cavity filled with yeast organisms, some of which showed budding. These organisms were about the size of red blood cells, some of them larger; many of them had a brownish precipitate in the center arranged in a stellate form. Some showed an outer zone, separating them from other organisms. Here and there in the interstitial tissue were collections of round cells. No giant cells were seen. No distinct tubercles were found and there were no areas of caseation. Sections of the lung away from the cavity showed alveoli filled with leucocytes and red blood cells, but no organisms were found there.

Microscopic examination of sections from the meninges showed numerous yeast organisms lying

in vacuoles between the endothelial cells, which were spread far apart. In between were scattered a good many round cells. Some of the blood vessels showed a marked perivascular infiltration of round cells.

Microscopic examination of sections of the brain in the region of the optic thalamus showed the tissue replaced by numerous collections of these same highly refractive spherical organisms. Most of them were surrounded by an outer zone which separated them from each other, but there were very fine threads running between, apparently holding them together. The organisms seemed to have replaced the brain tissue, with no inflammatory reaction whatever. There were a few round cells scattered here and there, but no giant cells were found. Sections in the region of the corpora quadrigemina and cerebellum showed areas containing calcareous deposits, and occasional giant cells with marked increase in fibrous tissue. It was difficult to find any organisms in these sections. Evidently these were healed lesions. The accompanying photographs show the organisms as they appear in the brain tissue, in the spinal fluid, and in the cultures.

ANATOMICAL DIAGNOSIS

Chronic meningo-encephalitis with foci of infection in optic thalami and corpora quadrigemina. Hypostatic pneumonia of lower lobes of both lungs with pleuritic adhesions at right base, and cavity formation in right lower lobe caused by torula. Acute mitral endocarditis; cloudy swelling of kidneys; small fibromyoma of uterus.

The initial lesion in this case was probably in the lung, and the disease was evidently of long duration, as evidenced by the efforts at healing found in the region of the roof of the fourth ventricle. We want to call your attention again to the fact that the diagnosis of such infections may be very easily overlooked and that this disease may be much more common than is generally supposed.

516 Auditorium Building.

DISCUSSION

Philip H. Pierson, M. D. (516 Sutter Street, San Francisco)—I have read with considerable interest the excellent manner in which Bettin has presented this case of torula infection. I would like to emphasize the following points: It is of a great deal of importance to report in as much detail as possible even a single case of this type, for by their accumulation we get very valuable data. The finding of so many torula organisms in the spinal fluid is not common and was probably due to the breaking down of one of these small areas. In any case of questionable meningeal involvement it is advisable to make cultures on glucose agar, as in this case, for when the organisms are present their growth is best watched on such media. I am interested in the fact that old calcified lesions in a healed state were found, for this is further evidence, as I suggested in my report of a case, that the disease may be much more frequent than expected and escape notice. While the pathology of this infection does not bear any direct similarity to that of Virchow's disease, may there not be a stimulation from these calcified meningeal lesions for the overgrowth of the bony structure in Virchow's disease? Perhaps Bettin will answer this in her closing discussion. In one of Cutler and Stoddard's cases which I had the opportunity to see, the portal of entry was the ear in all probability. The same is possibly true in this case, although it may have been directly through the respiratory system. Another point of considerable interest is the difficulty in distinguishing this infection from tuberculosis before death. The meningeal and pulmonary findings could clinically have very well passed for a tuberculous infection. Finally, I want to compliment Bettin on her very thorough presentation of this interesting case.

Newton Evans, M. D. (Loma Linda)—In reading Bettin's paper some points of interest have presented themselves. It is very fortunate in the development of our knowledge of this interesting but little known disease, that in this case it was possible to secure so complete a clinical history of the progress of the disease and a satisfactory autopsy.

All of Bettin's findings are in remarkable conformity to the clinical and pathological findings in the few cases previously reported. One is much impressed by the apparent parallelism, between the clinical history and pathological findings, and by the possible explanation which is afforded for the period of amelioration of symptoms, by the partial healing of the lesion in the region of the fourth ventricle, and later for the recrudescence of the symptom, by the development of the lesions of the optic thalamus.

One cannot escape the impression that possibly if more careful microscopic observation of the fresh spinal fluid had been made at the time of the first spinal puncture reported, the organisms might have been detected at that time, even though the efforts at culture were without results. Experience has shown that a cursory microscopic observation may easily mistake the organisms for lymphocytes.

I am gratified to see this report of an additional type case, which emphasizes the conclusion that we have in the torula infection a clinical entity which is of the nature of meningeal-encephalitis and is of great interest and importance.

Gentian Violet in Staphylococcus Septicemia—Churchman found that gentian violet in 1:1,000,000 dilution will inhibit the growth of staphylococci. A dilution of 1:50,000 has no deleterious effect on white blood cells that have been exposed to it for two hours. A 1:20,000 dilution has no effect on growing tissues. David T. Smith and Horton Casparis, Baltimore (Journal A. M. A., December 29, 1923), have given 10 mg. per kilogram of body weight intravenously to rabbits (calculated dilution in the body fluids of 1:70,000), with no effect except instant staining of the mucous membranes and sclerae. The staining later disappeared. They, therefore, felt justified in injecting gentian violet intravenously into an infant, age 15 months, suffering from staphylococcus septicemia. Staphylococcus aureus had been demonstrated in two blood cultures made during the three days preceding the first injection. There were about ten colonies per cubic centimeter of blood. Three injections of a 0.25 per cent aqueous solution of gentian violet were given at 24-hour intervals. The first dose was 5 mg. per kilogram of body weight. The calculated resulting concentration of the dye in the body fluid was 1:140,000, assuming the fluid content of the body to be 70 per cent of the body weight. The white blood cell count, which was 22,000 at the time of injection, was reduced to 10,000 12 hours later, but returned almost to the original count during the next 12 hours. Because of the possibility that the reduction in the white blood cell count was due to the effect of the dye in that concentration, the amount was reduced, and the second and third doses consisted of 4 mg. per kilogram of body weight. Blood cultures made immediately preceding the second and third injection were sterile. After the third injection the patient's appearance had improved, his fever was reduced, and the white blood count had decreased.

CANCER OF THE ESOPHAGUS IN GENERAL PRACTICE

By GORDON F. HELSLEY, M. D., San Francisco

There is a general conception that carcinoma of the esophagus is a rather rare condition. That this is not exactly true is shown by practically all extensive autopsy series, five of which give 413 cases in 39, 312 post-mortems or one case in 95 deaths. The actual frequency is doubtless somewhat less than this, but certainly esophageal cancer is by no means an unusual disease.

Since at least nine-tenths of the cases are in men, we should expect it to rank fairly high among the tumors of the male sex. It is quite beyond one's expectation, however, to find from an overwhelming list of statistics that in men cancer of the esophagus is exceeded in frequency only by cancer of the stomach.

This being the case it is eminently desirable that every physician be able to recognize a case of this disease. Usually the diagnosis is easy. An adult over 40 years, usually a man, complains of difficulty in swallowing of comparatively short duration. The trouble possibly began quite acutely when he was swallowing a poorly masticated piece of bread or meat. Semi-solids or liquids could be taken as usual, however. Later, even with thorough mastication, solids could no longer be swallowed. Finally, liquids go down with difficulty.

There are several important variations from this history. The complaint may be of vomiting, sometimes quite a while after eating. This regurgitation can be easily distinguished from true vomiting, but often the distinction is not made until after a course of treatment for stomach trouble. The difficulty in swallowing is not always progressive. It may have been but a passing incident, casually mentioned by the patient, or it may have been very severe for several weeks or months, and then disappeared. Although such intermittence is not common, it must be borne in mind. The typical cases are self-diagnostic; it is the diagnosis of the atypical ones which deserves attention.

There are quite a few cases in which there is *no* history of dysphagia. It is not at all unusual for a well-developed cancer of the esophagus to be found at autopsy entirely unexpectedly. Personally, I feel that this is usually due to lack of care in the anamensis, but it goes to show how little evidence there may be from a stenosing tumor.

There are other symptoms of variable importance. Hoarseness may be of definite diagnostic value. The regurgitation of food and saliva mixed with blood and sometimes purulent material is a very ominous, almost pathognomonic symptom. Pain in the chest or epigastrium may be complained of, and rapid loss of weight is commonly mentioned.

Examination notes a gaunt, hungry-looking man without cachexia. Some claim that the appearance is so characteristic that they can make a diagnosis at first sight. The salivary glands often show visible and palpable hypertrophy compensatory to the excessive mastication. The breath is foul, and food remnants may be present in the pharynx. Auscultation over, the cardia shows delay in the esophageal emptying sound. Examination with the laryngeal mirror sometimes reveals paralysis of one or even both vocal chords. Metastasis formation may be found in the cervical lymph glands.

Before a definite diagnosis can be registered, some other conditions must be differentiated. A benign stricture from a corrosive is to be considered, but the history usually decides that. However, I have seen several cases of stricture following corrosion in which no history was obtainable of the patient's having swallowed any corrosive substance. Sometimes this is due to reluctance to acknowledge a suicidal attempt. If the patient is of unsound mind a history is commonly unobtainable. In addition there are cases of corrosive stricture in intelligent patients where there is no knowledge of ever having swallowed anything injurious.

Stricture of the esophagus may be caused by tuberculosis or more frequently by syphilis. Both these relatively rare etiological factors can be partly substantiated or ruled out by a complete history and thorough examination with the appropriate tests, but the only way one can be certain is by microscopic examination of an excised specimen.

Pressure from some extrinsic source, aortic aneurism or mediastinal tumor must be considered and judged by a careful examination. Also a goiter may cause dysphagia, but it must be remembered that the presence of a goiter does not rule out an esophageal cancer. I know of a case in which strumectomy was done to relieve difficulty in swallowing. The operation brought no relief, and a short time later autopsy revealed a cancer of the esophagus.

Cardiospasm, hysterical dysphagia, and esophageal diverticula all have a characteristic history, but are often very hard to differentiate from a neoplasm.

In all these cases of dysphagia it must be strictly borne in mind that carcinoma is the most frequent disease of the esophagus. So Chauffard reports that of 1700 esophageal cases, 1020 were cancers. If the patient is over 40, more particularly if a man, and has symptoms or signs in the least suggestive of cancer of the esophagus, this should be considered the presumptive diagnosis, to be ruled out only with the greatest caution.

It is worth while in every case of chronic disease to ascertain whether or not the esophagus has always properly functionated. The knowledge of a pre-existing, though transitory, attack of dysphagia may give the correct explanation for a putrid bronchitis due to an esophago-bronchial fistula, a diabetes due to pancreatic metastases, or ascites and jaundice due to secondary growths at the liver hilus.

Far more important than accurate diagnosis, from the patient's viewpoint, is the possibility of curative treatment, and this depends on early diagnosis. To this end the same attention must be directed to the esophagus of every patient as is given to the other organs of the body.

If anything indicates esophageal disease one's full diagnostic powers should be brought into play. But whatever opinion one has, it should at once be put to the test of an X-ray examination, both screen

and film, and this before use is made either of a sound or of an esophagoscope. The former has no place in the diagnosis of cancer of the esophagus; the latter should always be preceded by X-ray examination. For all practical purposes the Roentgenological evidence is conclusive. If desired, an esophagoscopic examination can be made for confirmation, and to finally clinch the diagnosis a bit of the tumor can be excised for microscopic examination. This latter procedure is, however, somewhat dangerous in itself and is probably conducive to metastasis formation, so if done at all it should be only as the first stage to a radical operation.

Let us suppose now that the case has been referred back by the Roentgenologist with the diagnosis of probable carcinoma of the esophagus. The patient looks to his physician for treatment.

The proper treatment of any disease is curative, if possible. In a cancer that means removal or destruction of the growth. An authoritative medical system of recent date says: "As carcinoma of the esophagus is a fatal disease surgical intervention with the idea of cure is contra-indicated." The same nihilistic attitude is commonly present throughout the profession, and it makes frequent appearance in the literature. The facts of the matter give considerable justification for such a standpoint. Sauerbruch, with the skill and experience that marks him as pre-eminent in thoracic surgery, has operated 200 cases of cancer of the esophagus without curing a single one. (Personal communication.)

But there is another side to this. There are on record many cases of successful resection of carcinomas of the cervical portion of the esophagus. There have been at least five successful operations on the thoracic portion, but only the case of Torek has stood the test of time and can be considered as a cure. Still, it has been clearly shown that the operation is technically possible.

The chances of finding a tumor which is not too large for resection and which has not metastasized are, or at least should be, better here than in most internal cancers, for it presumably gives its symptoms early and to a remarkable degree is a benignant neoplasm. It has been described as the most benign cancer. At the time when the first symptoms are well established, at the time when the diagnosis should be made, a very large proportion are operable—surely, over half.

Of course, if there is definite evidence of metastasis formation or extensive infiltration, radical operation is not to be considered. The X-ray may show the growth to be so extensive that resection is clearly impossible. If the growth is situated immediately above the aortic arch, it is inaccessible to present surgical technique. The age and physical condition of many patients absolutely forbid a formidable operation.

If none of these contra-indications are present, these cases should be considered proper subjects for operation, providing the work can be done by a surgeon skilled in the necessary technique. The true facts of the case should be explained to the patient and his family; the rapidly fatal course of the disease, the impossibility of cure by any method other than surgery, and finally the faint hope offered by radical operation. There will be found many patients who desire to take this chance.

Then the case should, without delay, be put in the hands of a surgeon. It is important that gastrostomy should *not* be done before the case is referred to the surgeon who will attempt the radical operation, since such a procedure may seriously interfere with his operative plan. With what the surgeon may do and should do we are not here concerned. That interesting chapter is too long to even touch on.

Since the results from operative treatment have been quite discouraging, physicians have grasped at everything else that offered hope for either cure or palliation. Most important of these is radium. There have been many reports of favorable results, particularly from the French, and one case of apparent cure. The general unsatisfactory results and the difficulty of rational application, however, indicate that radium is as little suited to treatment of cancer of the esophagus as it is for other cancers of the alimentary canal. When the final judgment of Forbes, who has had extensive experience with radium treatment, is that, on the whole, the results were nil and that death was hastened, so that he has abandoned its use in these cases, we may well feel that, as a substitute for surgery on operable cases, radium is decidedly unsuitable.

With respect to purely palliative treatment, we have radium and deep X-ray therapy, which seem to be very useful in some cases, useless or injurious in others. Dilatation may be carried on by means of fusiform bougies preferably introduced over a guide-wire, or by laminaria pencils. Other methods of treatment are the installation of inlying canulae, cauterization, and treatment with astringent medication. Except for radiotherapy, these procedures are so unsatisfactory and also dangerous that they do not merit serious consideration. All these local methods of treatment have the disadvantage of accelerating local infiltration and the formation of metastases. Something can be done in the choice of smooth, non-irritating food. It must be borne in mind that the dysphagia is caused in many cases by a spastic contracture more than by tumor obstruction.

When swallowing finally becomes too difficult, we still have left gastrostomy to prevent death by starvation. It is noteworthy how often this procedure fails to prolong life. Forty-two cases which I reported lived an average of twenty-eight days after gastrostomy. This is quite in accord with general statistics on the subject, and would indicate that this is practically a useless operation for these cases. The truth is, however, that, if the gastrostomy were done a few weeks earlier, while the metabolic balance was better maintained and before the patient was thoroughly dehydrated, the statistics would be greatly improved.

It is often necessary to make a prognosis in these cases, and that is very difficult. Every cancer is a law unto itself, and there are most remarkable variations in malignancy. The average duration of life after the first symptoms of carcinoma of the esophagus is reckoned to be about six months. The

careful use of radium and X-ray and a fairly early gastrostomy will probably lengthen this period somewhat. The prognosis must always be guarded. I know of a patient with undoubted cancer of the esophagus for whom nothing whatever was done, but yet eighteen months after his discharge from the hospital he was in apparent good health, with only slight dysphagia. Such cases also force us to accept with reservation reports of apparent cures, by radium for example.

SUMMARY

Cancer of the esophagus is an important disease of the adult male. Careful anamensis regarding dysphagia is important in all cases of chronic disease. If suspicion of esophageal carcinoma arises, the sound should not be used, but the case sent for X-ray. With Roentgen diagnosis of cancer, the question of operability should be considered; if there are no contra-indications and the patient so desires, the case should be put in the hands of a competent surgeon. The lapse of time for all this to be carried through should number days, not weeks or months. If the case is inoperable or declines operation, treatment by radium and X-ray, with eventual gastrostomy, comes into view. The average expectancy of life after the first symptoms is six months.

The success of curative surgery for cancer of the esophagus depends on the co-operation of the medical practitioners, who first see these cases, with the surgeons. As Sauerbruch has said, the delay in having the surgeon see the case is not usually the result of a late diagnosis, but is due to the ruling opinion that the condition is absolutely inoperable. The greatest danger from sounds, radium, etc., is not the direct injury they may cause the patient, but is that patients who should be sent for operation, who would be glad to have operation, are treated by these temporizing methods until the golden hour of operability has passed.

291 Geary street.

DISCUSSION

Edwin I. Bartlett (291 Geary Street, San Francisco)—Carcinoma of the esophagus is indeed a gloomy subject. It would seem that nature has failed to provide any way of escape for the victim. The symptoms appear only in the late stages of the disease: the carcinomatous cells have a tendency to invade longitudinally ofttimes for several inches so that removal of the growth with a fair margin may mean extensive resection: the technical difficulties in the removal of the thoracic lesion, no matter how small, are insurmountable: the disease generally appears in a man who is the only bread-winner of the family, and he has only a few months to live after the disease is discovered.

Discussions of such a subject can have little practical value. There is a phase of this subject, however, as pointed out by Helsley, which is of practical importance, viz., the type of treatment for palliative effect. This should consist of the simplest procedure for supplying food and fluid to the stomach, and in the majority of instances, simple gastrostomy gives the best results. Any attempts at treatment of the local lesion either augment the disagreeable or distressing symptoms or result in death. Radium, which promises so much in the treatment of malignant disease, has failed to destroy the local lesion, has made the patient more miserable, and has brought death more quickly. Radical surgery has no cures to its credit, and nearly every case so treated has died from the operation.

Improper treatment through mistaken diagnosis is such a common error that its mention in this paper bears emphasizing. The danger is not from the fatal delay or from stimulation to growth of the neoplasm. It involves a waste of money and effort, and possibly may result in unnecessary surgery and greater suffering. Carcinoma of the esophagus must always be borne in mind in the presence of symptoms referable to the mediastinum or stomach, and in all instances of disturbance of deglutition and phonation. Any occasion which requires an examination of the larynx or bismuth studies of the gastro-intestinal tract demands careful consideration and close observation relative to esophageal neoplasm.

Dr. Helsley (closing)—It is gratifying to have Bartlett confirm and emphasize some of the most important points of my paper. Particularly, his recognition of the fact that carcinoma of the esophagus is not always self-diagnostic and the reasons he gives why accurate diagnosis is important are worthy of thought.

We occupy irreconcilably opposed positions as to the applicability of radical surgery to this condition. I have seen the case which Torek cured and I know that there could be no more unfavorable location for the tumor than this one, which was successfully removed. Therefore, I feel that the outlook is not without hope and that progress can be made only as medical practitioners displace from their minds the nihilistic attitude which has so long ruled this field.

THE RELATION OF GROWTH TO RICKETS *

By SIDNEY BOWERS, M. D., Los Angeles
(From the Department of Pediatrics, University of Minnesota Medical School.)

Many observers have noted the influence of growth upon the development of rickets. Czerny and Keller state that overfeeding must be avoided as prophylaxis against rickets, even with breast-fed infants. They have not observed florid rickets in underfed infants. Esser believes rickets is due to overfeeding. Mellanby observed that some elements of diet increase growth and allow calcification processes to lag behind. The greater the growth the more necessary it is to have in the diet and absorbed substances which aid in calcifying bone, namely, calcium, phosphorus and anti-rachitic vitamine. When these latter substances are relatively deficient or defective in their action, rickets results. Hess found that those infants were most likely to develop rickets who, in a poorly nourished condition, subsequently thrived and gained in weight. McClendon observed that, during loss of weight, a small amount of phosphorus prevented rickets in rats, while during normal growth a much larger amount was necessary. "Every growth-promoting substance has a rachitic influence when it promotes growth; therefore, every anti-rachitic substance that promotes growth may have two opposing actions." In rats, remaining at stationary

* Read before the Southwestern Pediatric Society, September 5, 1923.

weight over a long period, the phosphorus requirement for building up new tissue is greatly reduced. Under such conditions, the small addition of phosphorus to a standard rickets-producing diet suffices to enable the bone to recalcify, and a spontaneous cure of rickets results.

It was noticed in rats that when strontium replaced calcium in an otherwise satisfactory diet, it stimulated growth and caused the bones to develop the picture of "strontium" rickets. Jundell has treated cases of rickets with relative inanition, and claims excellent results. From the observations and experimental work of numerous investigators discussed above, it would seem as if there was a definite relationship between certain factors of growth and the development of rickets. In an attempt to determine this, the following study was conducted:

PROBLEM

Infants between the ages of six months and eighteen months inclusive were examined. There was no selection of cases except as regards age. The examinations were carried on during the months of August to December, inclusive, 1922. In all 223 cases were examined.

The examination data consisted of the following:

Age, sex, birth weight, present weight, body length, feeding history, when first sat up, when first walked, dentition, presence or absence of craniotabes, size of the fontanel, measurement of any zone of softening in the region of the fontanel, head and chest circumference; the presence or absence of a square type head, of rosary, of Harrison's groove, of chest deformities, of protuberant abdomen, of palpable spleen, or of enlarged epiphyses; the condition of the musculature and the diagnosis. In some cases roentgenograms of the epiphyses of the wrists and ankles were obtained.

The birth weight was gotten from the parents who, in most cases, seemed to have fairly accurate information regarding this. Feeding data was procured from the parents and from the clinic record. Past weight records, as well as the present weight of the infants, was obtained from the clinic records, having been determined by nurses trained in this work. The length was accurately measured with a board especially constructed for measuring the length of infants. Measurements of the fontanel were taken from a traced outline of it, according to Elsässer's method. This consists of measuring the two diameters from the four points midway between the angles, these being added and divided by two. The chest circumference was taken at the nipple-line. The condition of the musculature was graded good, fair, and poor. The positive signs were graded one, two, and three plus, as was also the diagnosis of rickets. This was carefully considered in every case. At this time it would be well to mention a few important points in consideration of the diagnosis of rickets.

Hess and Unger place beading of the ribs as the most reliable of the immediate clinical signs in the diagnosis of rickets, with the disadvantage that it does not differentiate between the active and inactive phases of the disorder. A negative roentgenogram does not rule out early rickets. The inorganic phosphate of the blood is generally diminished in the early stages of rickets, but this is not pathognomonic. Schwarz concluded, from a study of craniotabes in infants, that at least during the first six months, rickets could not be diagnosed on the basis of this sign. Park has reported the types of costo-chondral junction, which may occur in rickets. Numerous investigators, among whom are Baetjer, Jacobson, Albert-Weil, and Giles have contributed data on the Roentgen-ray diagnosis of rickets.

In the present study, roentgenograms were taken of the epiphyses of the wrists and ankles in 94 cases. Of these cases, 32 were rachitic, although the roentgenogram was only definitely positive in 17 of these. Of the 223 infants examined, there were 69 cases of rickets, or 30.94 per cent. There were 103 female infants with 32 cases of rickets, or 31.6 per cent, and 120 males, with 37 cases of rickets, or 30.83 per cent. A classification of the cases according to age in months and sex, with the number of cases of rickets in each, is shown in Table I.

TABLE I

	Males		Females		Total	
Age in Months	No. of Cases	Cases of Rickets	No. of Cases	Cases of Rickets	No. of Cases	Cases of Rickets
6	21	9	14	5	35	14
7	29	6	11	1	40	7
8	10	4	14	4	24	8
9	11	5	11	2	22	7
10	8	2	10	1	18	3
11	5	0	5	2	10	2
12	4	0	8	3	12	3
13	9	4	5	1	14	5
14	4	1	8	4	12	5
15	5	3	6	3	11	6
16	3	0	5	2	8	2
17	6	2	2	2	8	4
18	5	1	4	2	9	3

Feeding—The feeding history was obtained in 219 cases. Of these 170 were entirely breast-fed for six months or more, except for the addition of cereal in the fourth or fifth month in a few cases. There were 52 of these with rickets, or 30.58 per cent. There were 34 infants that were breast-fed less than six months, most of these having had a subsequent feeding of a cow's milk mixture. There were 15 infants partially breast-fed for more than six months, 13 having had complemental feeding, and 2 supplemental feeding, consisting of a cow's milk mixture. This made a total of 49 cases based partially or entirely upon artificial feeding. There were 17 cases of rickets among these, or 34.69 per cent.

Most of the 219 cases when six months old had cereal added to the diet, vegetable when seven months, and orange juice in a large number of the cases by the third or fourth month. All cases in which rickets was diagnosed, with the rosary as the only definite sign, had received some anti-scorbutic in the diet for some time previous. Most of the breast-fed infants were entirely weaned by the

tenth or eleventh month. An outline of the feeding is shown in Table II.

TABLE II

219 Cases with Feeding Data
170 Entirely Breast-fed 6 Months or More—52 of These Rachitic, or 30.58 per cent

Breast-fed Less Than Six Months

Time B. F.	No. of Cases	Cases of Rickets	Later Feeding: No. of Cases	Feeding	Cases of Rickets
			9	Cow's milk mixture	0
1 mo. or less	10	0	1	Protein milk	0
			5	Cow's milk mixture	1
2 mos.	6	2	1	Malted milk	1
			9	Cow's milk mixture	5
3 mos.	11	7	1	Malted milk	1
			1	Protein milk	1
4 mos.	4	1	4	Cow's milk mixture	1
5 mos.	3	0	3	Cow's milk mixture	0
Total	34	10			

Time B. F.	No. of Cases	Cases of Rickets	Later Feeding
1 mo.	4	2	
2 mos.	3	2	Breast-feeding plus complementary or supplementary feedings of a cow's milk mixture.
3 mos.	3	1	
4 mos.	1	1	
5 mos.	4	1	
Total	15	7	
Total no. of infants either partially or entirely artificially fed	49	17	34.69% rickets.

Monthly Incidence—The cases grouped according to sex and the month they were examined in, with the incidence of rickets in each, is shown in Table III. This shows a very definite increase in the incidence of rickets from August to December, inclusive, with a total of 24.24 per cent rachitic cases in August, and 39.13 per cent in December.

TABLE III

Months	Males: No. of Cases	Males: Cases of Rickets	Males: Per cent Rickets	Females: No. of Cases	Females: Cases of Rickets	Females: Per cent Rickets	Total: No. of Cases	Total: Cases of Rickets	Total: Per cent Rickets
August	33	10	30.30	33	6	18.18	66	16	24.24
September	10	1	10.0	2	1	50.0	12	2	16.66
October	46	13	28.26	37	11	29.72	83	24	28.91
November	19	9	47.36	20	9	45.0	39	18	46.15
December	12	4	33.33	11	5	45.45	23	9	39.13

GROWTH

The factors considered under growth were weight, length, ponderal index and rate of growth. Curves were plotted from Baldwin's figures on the growth in weight and length of normal infants, both male and female. These are shown in Charts 1, 2, 3, and 4. Ponderal indices were computed from Baldwin's figures according to the formula

$$\text{(ponderal index) } PI = \frac{\text{(weight) } W \times 1000}{\text{(length) } L^3}$$

Curves were plotted for the same.

Figures of normal deviation were then computed from the normal curves by the semi-quartile method. This allows a 12½ per cent deviation above and also below the normal curve for normal deviation. These curves were plotted on each chart.

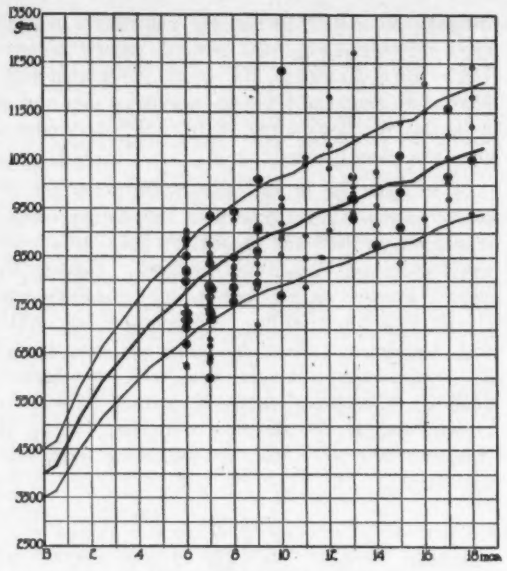


Chart I—Weight, Males

The figures of the cases included in this study were then entered about these normal curves, respectively, according to sex and the factor considered.

It will be noticed in Charts 1 and 2 that the cases in general compared well with Baldwin's normals in weight. Charts 3 and 4 show that, in length, they fell somewhat below those of Baldwin, while regarding ponderal index, Charts 5 and 6 show that they were somewhat above his, although, in general, were within the limits of normal deviation.

The cases were then grouped according to whether they were above normal, or below normal in weight, length and ponderal index with the sex given for each. The percentage of rickets in each group was computed. These figures are shown in Table IV.

TABLE IV

Condition	Males: No. of Cases	Males: Cases of Rickets	Males: Per cent Rickets	Females: No. of Cases	Females: Cases of Rickets	Females: Per cent Rickets	Total: No. of Cases	Total: Cases of Rickets	Total: Per cent Rickets
Overweight	13	4	30.76	9	4	44.44	22	8	36.36
Normal weight	94	30	31.91	77	22	28.57	171	52	30.40
Underweight	13	3	23.07	17	6	35.29	30	9	30.0
Overlength	..	..	.....	..	..	.....	..	..	.....
Normal length	117	36	30.76	102	31	30.39	219	67	30.59
Underlength	2	..	.....	..	..	.....	2	..	.....
High ponderal index	29	9	31.03	31	10	32.25	60	19	31.66
Normal ponderal index	89	27	30.33	70	21	30.0	159	48	30.18
Low ponderal index	1	..	.....	1	..	.....	2	..	.....
Extra rapid growth in weight	15	4	26.66	9	4	44.44	24	8	33.33
Normal or below normal growth in weight	105	33	31.42	94	28	29.78	199	61	30.65

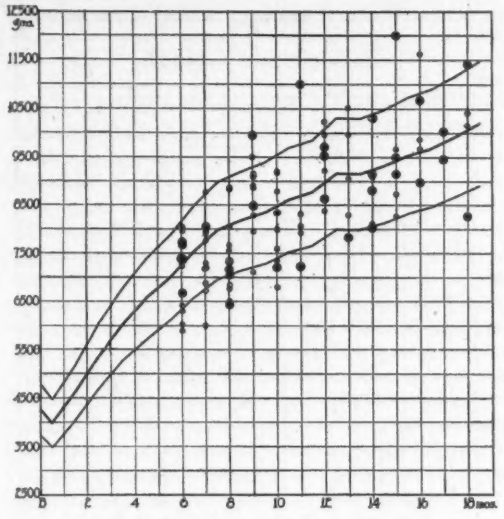


Chart II—Weight, Females

Weight—In total, these were 22 overweight infants, with 8 cases of rickets, or 36.36 per cent; 171 normal weight, with 52 rachitic, or 30.40 per cent; and 30 underweight, with 9 rachitic, or 30 per cent. Thus, a definite increase is seen in the percentage of rickets in overweight infants.

Length—In the case of 2 of the 223 infants, one female and one male with rickets, the length was not obtained. There were no overlength infants. The normal length infants number 219, with 67 rachitic, or 30.59 per cent. There were 2 underlength infants, with no rachitic.

Ponderal Index—There were two of the 223 infants, one male and one female with rickets, in which the ponderal index could not be determined on account of not having the length. Of 60 infants with a high ponderal index, there were 19 cases of rickets, or 31.66 per cent; 159 with a normal ponderal index, with 48 rachitic, or 30.18 per cent; and 2 with a low ponderal index with no rachitic.

It is plainly seen in the ponderal index charts that the majority of cases of rickets not only occur in the upper normal deviation level, but that the closer the upper normal limit is approached the more cases of rickets are seen. Therefore, had the normal deviation limits been placed closer to Baldwin's normal curve, there would have been a much larger percentage of rachitic cases in the high ponderal index group than as it now stands.

Rate of Growth—From the previous weight records, which in many cases contained monthly weight observations, curves were plotted of all the cases considered in this study.

The curves were then compared with those of the normal according to the sex considered, and any extending above the normal deviation limit were classified as cases of extra-rapid growth.

In this group there were 24 cases of extra-rapid growth in weight, with 8 cases of rickets, or 33.33 per cent. The other cases were either normal or below normal growth in weight and totaled 199, with 61 cases of rickets, or 30.65 per cent.

Thus, it is easily seen, that there is an increase in the number of cases of rickets among infants with extra-rapid growth in weight.

SUMMARY

In this study 223 infants were examined. Among these there were 69 cases of rickets, which made a percentage of rickets of 30.94. The percentage of rickets was 30.58 among the infants that had been

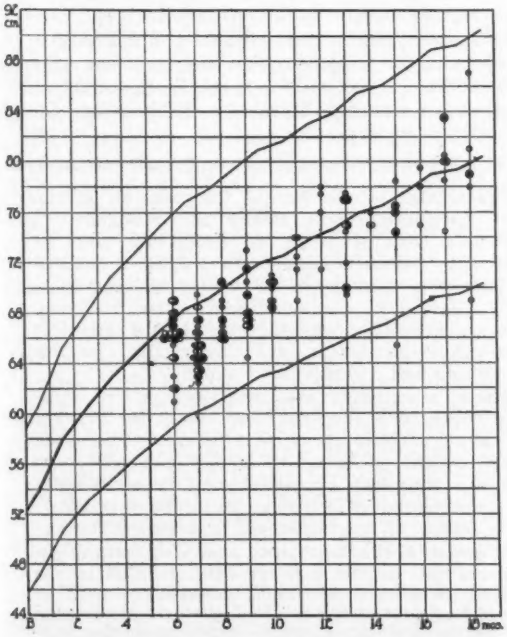


Chart III—Length, Males

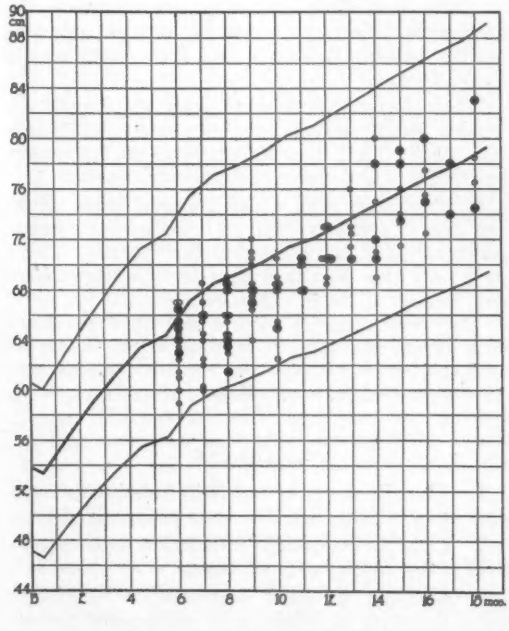


Chart IV—Length, Females

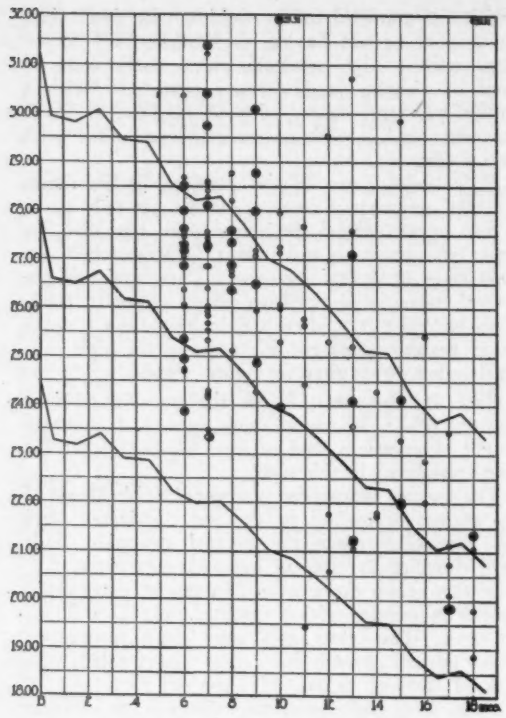


Chart V—Ponderal Index, Males

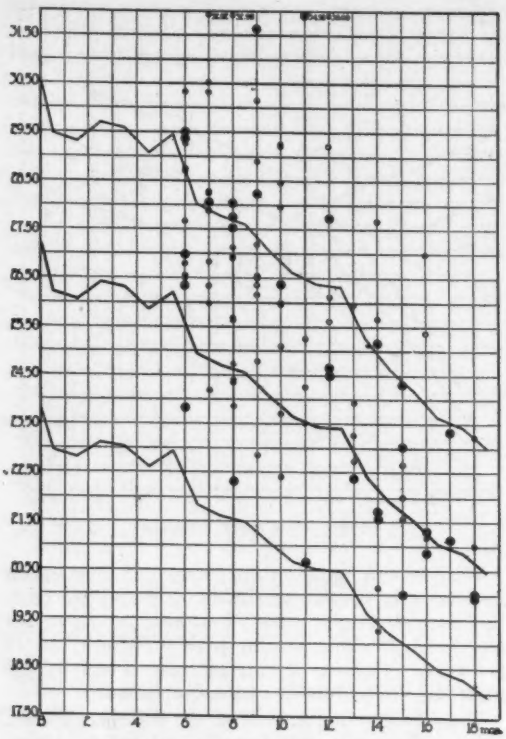


Chart VI—Ponderal Index, Females

Note—White center, non-rachitic; black center, rachitic.

breast-fed for six months or more, as compared to 34.69 per cent among those that were partially or entirely upon artificial feeding during the first six months. The percentage of rickets among the cases examined in August was 24.24, while in December it was 39.13.

There was 36.36 per cent rickets among the overweight infants, as compared to 30.40 per cent among the normal weight, and 30 per cent among the underweight.

There were no overlength infants. Among the normal length infants, the percentage of rickets was 30.59. Only two infants were in the underlength group and neither of these had rickets.

Of the infants with a high ponderal index, 31.66 per cent had rickets, and of those with a normal ponderal index 30.18 per cent had rickets. There were only two infants with a low ponderal index and neither of these had rickets.

The percentage of rickets among the infants with extra-rapid growth in weight was 33.33, as compared to 30.65 per cent among those infants with either normal or below normal growth in weight.

CONCLUSIONS

1. There seems to be a definite relation between growth in weight and the development of rickets.

2. Probably overweight infants are more susceptible to the development of rickets.

3. Also, an increased susceptibility to rickets probably occurs in infants with extra-rapid growth in weight.

4. The factor of the seasonal incidence of rickets is again borne out.

5. An increased incidence of rickets among artificially fed infants is again demonstrated.

I wish to express my appreciation to Rood Taylor, assistant professor of pediatrics, University of Minnesota, for suggesting this study and for valuable advice. I also wish to thank R. E. Scammon, professor of anatomy, University of Minnesota, for valuable suggestions.

Proceedings of the Annual Congress on Education, Licensure, Public Health and Hospitals—A report, a copy of which, no doubt, has been received by officers of all State boards, is so distinctive that it deserves more than passing comment. Issued in a comprehensive form, it constitutes an innovation, and the press of the American Medical Association is to be commended for this interesting and valuable publication.

These proceedings are expressive of the close inter-relationship that has been developed between the allied subjects of medical education, licensure, hospitals, and public health in this country, and at the same time each annual congress forms an index of the progress of American medicine, particularly as it relates to the betterment of human welfare.

A review of the discussions presented further emphasizes the wisdom and foresight that led to the establishment of these annual conferences, and the stimulating contact of the allied interests represented by the several organizations comprising the congress.—(Federation Bulletin, October, 1923.)

EDITORIALS

CHANGE IN THE NAME OF THE JOURNAL

At its last meeting the Council of the California Medical Association passed a resolution authorizing the work previously conducted under the name of *Medical Society of the State of California* to be carried on under the name of *California Medical Association*. Among other matters considered and decided was that of appropriate change in the name of the Journal, and by resolution the Council instructed the editor to change the name of the Journal in some appropriate manner. Carrying out these instructions, with the approval of the Executive Committee, the name of the Journal has been changed, effective with this issue, to CALIFORNIA AND WESTERN MEDICINE.

This change at the same time complies with previous action of the House of Delegates and of the Council endorsing co-operation with the states of Utah and Nevada in making this Journal their official organ. Part of the agreement was, that at an appropriate time a more inclusive title would be given to the Journal.

ABOUT THE 1924 SESSION OF THE CALIFORNIA MEDICAL ASSOCIATION

The annual session of the California Medical Association will commence this year on *Monday*, May 12, instead of Tuesday, as heretofore, in order that Northern members may motor down with their families on Saturday or Sunday, and that those going South by train may take advantage of the $19 rate given on a 16-day round trip ticket starting Friday, Saturday or Sunday.

Headquarters are to be at the Los Angeles Biltmore hotel, Fifth and Olive streets, Los Angeles. The schedule of hotel rates, and Southern Pacific rates and time-table are appended.

All members who expect to attend the 1924 meeting should make their hotel reservations early with Mr. James H. McCabe, office manager of the Los Angeles Biltmore, who will confirm such reservations direct with the physician. The State office handles no reservations whatever.

The Committee of Arrangements report that they are providing for the visiting ladies golf and other entertainment. The scientific program will appear in a later issue.

Many section programs are full, and secretaries have been compelled to refuse good papers. Members who desire to have such papers published in the Journal can submit them to the editor after presenting them to some county or other medical society.

Hotel reservations for the State meeting this year are being handled through Mr. James H. McCabe, office manager of the Los Angeles Biltmore, Fifth and Olive streets, Los Angeles. The rates are as follows: (Each and every room has its own bath.)

Single Rooms—$5 to $10 per day.

Double Rooms—Double bed, $7, $8, $9, and $10 per day; twin beds, $10 and $12 per day.

Connecting Rooms—Three persons, $14 to $22 per day; four persons, $18 to $24 per day.

We would suggest that members make their reservations **now** direct with Mr. McCabe, that there may be no disappointment later.

SOUTHERN PACIFIC RATES FOR STATE MEETING

Leaving Friday, Saturday, Sunday, 16-day ticket, round trip, $19.

Leaving Monday, 30-day ticket, round trip, $22.

Lower berth, $4.50; upper berth, $3.60.

Drawing-room, $16.50; compartment, $12.75—two tickets.

Third and Townsend Streets

Lark—Leaves San Francisco 8 p. m., arrives Los Angeles 9:35 a m. Leaves Los Angeles 8 p. m., arrives San Francisco 9:35 a. m.

Sunset Limited—Leaves San Francisco 5 p. m., arrives Los Angeles 7:45 a. m. Leaves Los Angeles 8 p. m., arrives San Francisco 10:30 a. m.

Daylight Limited—Leaves San Francisco 7:45 a. m., arrives Los Angeles 8:30 p. m. Leaves Los Angeles, 7:45 a. m., arrives San Francisco 8:30 p. m.

Ferry Building

Owl—Leaves San Francisco 6 p. m., arrives Los Angeles 8:50 a. m. Leaves Los Angeles 6 p. m., arrives San Francisco 8:50 a. m.

Padre (via Coast)—Leaves San Francisco 7:40 p. m., arrives Los Angeles 9:35 a. m. Leaves Los Angeles 7:45 p. m., arrives San Francisco 9:35 a. m.

Sacramento

Sacramentoan—Leaves Sacramento 4:10 p. m. arrives Los Angeles 7:55 a m. Leaves Los Angeles 6:15 p. m., arrives Sacramento 9:55 a. m.

OPTIONAL MEDICAL DEFENSE

LETTER NO. 4

February 6, 1924.

To All Members of the California Medical Association:

Dear Doctor:

The Indemnity Defense Fund was terminated as of November 30, 1923, and Medical Defense terminates as of June 30, 1924.

For those desiring it, Optional Medical Defense has been provided by the Council, effective July 1, 1924. Under this plan those not desiring Medical Defense are relieved from any financial obligation for the same, and Medical Defense is provided for the many members that have stated they wanted it.

This Optional Medical Defense by the Society's legal staff will be conducted in conjunction with the member's insurance carrier. All indemnity, including court costs, will be borne by the insurance carrier. For example, a member having Optional Medical Defense will be defended not only by the attorneys of his insurance company, but also by the Society's attorneys acting with the insurance company's attorneys for him; the Society's attorneys as his counsel being particularly concerned with all features of the member's defense touching him professionally and personally. Such arrangement is entirely acceptable to the insurance companies writing physicians' defense. This defense will be of the same character as that heretofore maintained by the State Association, except that it will only be available to those who apply and pay for same.

Members interested in the eradication of unwarranted malpractice claims and cases, and in Medical Defense against the same, can do so by applying for membership in the Medical Society of the State of California. This body was organized by the Council in June, 1923, immediately after the name of the

State organization, at the request of the American Medical Association, was changed to the "California Medical Association."

Any member of the California Medical Association in good standing, who has and maintains in force a standard physician's defense policy for $5000 or more, is eligible.

Dues for the first half year, from July 1, 1924, to January 1, 1925, are $5 (the dues for the first year having been fixed on the basis of $10 per annum). Dues are payable to the secretary, Balboa Building, San Francisco, California.

The management and conduct of this Optional Medical Defense is in the hands of a board of seven trustees. Those first elected are James H. Parkinson, Saxton T. Pope, William T. McArthur, George H. Kress, T. C. Edwards, Rene Bine and Charles L. Curtiss. The executive committee is James H. Parkinson, chairman; T. C. Edwards, Rene Bine, and Emma W. Pope, secretary.

Any member of the California Medical Association desiring to secure this Optional Medical Defense and to maintain the Society's present legal department should fill out, sign and mail to the secretary, Balboa Building, San Francisco, the following application.

Very truly yours,
EMMA W. POPE, Secretary.

Application for Membership in the Medical Society of the State of California.—The undersigned, a member of the California Medical Association in good standing, hereby applies for membership in the Medical Society of the State of California, and agrees to comply with and be governed by its constitution, by-laws, and the rulings of its Board of Trustees and Executive Committee.

The undersigned understands that membership dues are payable annually, first half year's dues, July 1, 1924, to January 1, 1925, being fixed at $5, and that membership can be terminated by the member at any time by resignation or failure to pay annual dues.

The undersigned holds physician's indemnity policy in the amount of $..... issued by..... Company, which indemnity insurance for at least $5000 with any licensed company must be kept in force to entitle undersigned to defense by the Society.

.....

Address .....

AMERICAN MEDICAL ASSOCIATION BULLETIN

The A. M. A. took a fine long step forward when the house of delegates voted to supply the Bulletin to every Fellow of the Association free or as part of the service to members.

Are you reading your Bulletin regularly and carefully? we recently asked ten members as we met them in the day's work. Three of the ten never looked at it; six read it carefully, and one did not remember ever to have seen a copy. This editorial note is to call attention to the importance of the Bulletin as a source of interesting and important information and to urge its more careful perusal by a larger number of Fellows.

LINGUAL ABSORPTION OF NITROGLYCERINE

The application of nitroglycerine to the tongue for the production of its ordinary systemic effects appears to be a fairly common method of administering the drug. However, the reason for the great efficiency and promptness of action has not been understood. According to some, the effects of the drug could only take place after swallowing, and, hence, after absorption from the stomach or intestine. Therefore, the effects would be no better than from the ordinary oral administration. That the tongue is superior to other regions of the alimentary tract for absorption of nitroglycerine has been demonstrated recently by Grossmann and Sandor of the medical clinic at Zagreb.

From observations of the changes in the blood pressure and pulse rate in a considerable number of patients, Grossmann and Sandor found that qualitatively these changes were the same, but quantitatively different, depending on the method of administration of the nitroglycerine. The actions were found to be strongest with lingual application or by rinsing of the mouth with fluid containing nitroglycerine. The effects from ordinary oral administration were slower and weaker. Direct administration through a tube into the stomach produced no effects whatsoever, and direct duodenal administration (also through a tube) gave only weak effects. The results in patients with hypertension were the same as in normal subjects. The dosage used was eight drops of the spirits of nitroglycerine in 10 to 15 cc. of water for rinsing the mouth. In tablet form on the tongue, the nitroglycerine was just as effective as in the form of spirits, indicating that the tongue has a good absorbing surface.

These simple observations of the Jugoslavian clinicians indicate something of the mechanism responsible for the conversion of nitroglycerine (chemically, glyceryl trinitrate) into nitrite, since it is the latter group which is responsible for the pharmacological action. This conversion is currently attributed to the influence of alkalinity in the intestine, and of the tissues in part, at least, a deduction based on the old experiments of Hay, who showed that the treatment of nitroglycerine by alkali liberated the nitrite radical. However, Grossmann and Sandor found that the degree of alkalinity necessary for the liberation is greater than the alkalinity present in the mouth or in the tissues. Acids were found to lessen the liberation of nitrite, and this agreed with the diminished efficiency of action from direct gastric administration of the nitroglycerine. The greater efficiency from direct duodenal administration agreed with the liberating influence of alkalies. However, the acidity of gastric and alkalinity of the intestinal juices are variable factors, and so far as the mouth is concerned, the degree of alkalinity would be insufficient in any case. Hence, the authors conclude that ferments, which are known to liberate nitrite from nitroglycerine, are important factors, but they attach a still greater importance to lipoid solubility in the case of lingual absorption.

Thus, it is seen how simple it may be to obtain definite, accurate and critical evidence of the action of a drug under clinical conditions. After pharmacological analysis, this is the method of choice

for clinical therapeutics, rather than the empirical method as ordinarily practiced, and which amounts to nothing more than guessing and carelessness. By the same token, the pharmacological analysis is confirmed or corrected, and in any case benefited. But, the greater benefit, no doubt, eventually goes to the patient.

Grossmann, M., and Sandor, J.: Klin. Wochn. 1923, 2:1833, "Zur klinischen Pharmakologie des Nitroglycerins."
Hay: Deutsch. med. Woch., 1884, p. 440, "Ueber die Wirkung der Nitrite und des Nitroglycerin bei Angina Pectoris."

THE NEW CONTROL OF SURGEONS

If the recent article under this title by Mr. William G. Shepherd (Harper's Magazine) were only the usual stupid and in part untrue attack upon the medical profession of our country, it might be ignored, as such articles usually are. There are two phases to this new attack upon the 140,000 odd of the total of some 150,000 educated physicians of the United States that make it demand some attention by all friends of better medicine everywhere.

One of these points is the editorial commendatory note italicized and published at the top of the article, which, whether or not so intended, will not produce a pleasing reaction in the minds and hearts of readers who still believe in medicine as a humanitarian profession and who still believe the body of educated physicians are just as honest, and thousands of them just as capable, as are the handful that the author exempts in his diatribe.

The other important point in the article is, the implication that a special medical organization with only some 6000 members stands sponsor for the alleged information which the writer attempts to impart to the world. Unless careful readings of the article have misled us as to the author's intentions, some of his statements about the American College of Surgeons are fabricated; we hope with greater care than are some of his other statements that have no basis whatever in fact. It is hard to believe that the astute leaders of the American College of Surgeons, even if they thought as Shepherd implies they do, would be so stupid as to put such a very thin veil over the obvious propaganda which appears to run like a thread through the article. Nor is it conceivable that the authorities of the College of Surgeons, a private and unofficial organization, would endorse a tirade against their fellow physicians—a public confidence-destroying criticism which has its appeal in an invidious comparison between a few thousand physicians, members of a limited organization of one specialty of medicine, and the probably more than 75,000 other physicians who are also doing surgery in the country, and for the most part doing it honestly and well. They graduated from the same schools as did members of the College of Surgeons and are honorable members of the official medical organizations of the country.

Even should a few—and they are probably only a few—members of the College of Surgeons believe that their new and, in Shepherd's eyes, important obligation to their self-selected standards entitles them to assume such a holier-than-thou attitude, they would surely not be so dense as to deal the blow to their own organization that the article is sure to cause. There can be little doubt that, whatever else this essay may do, it will prove first a severe blow to the College of Surgeons, and secondarily of course, to the cause of better medicine and all medical agencies. Already reports are coming to this editor of the chortlings of glee among the enemies of medical progress. They are saying that there are only some 6000 honest physicians among 150,000, and that these honest ones have banded themselves together with a hidebound oath "on the honor of gentlemen" to save medicine.

As to the article itself, most of it is the usual line of stupid propaganda that physicians have grown accustomed to see in certain kinds of journals prepared by publicity agents. A few particularly choice bits with comment, which of course is unnecessary to physician readers, may help the article on its way. The author says:

"To put it coldly, it is not entirely unlikely that some day you or I or some one we love may be wheeled into an operating-room, put to sleep under an anesthetic and be helplessly subjected to a surgeon's knife, at the risk of having life leave the body then and there, or being physically weakened for life, for no other motive than to put money into the pocket of a surgeon or a doctor."

This is a wholesale indictment of the integrity not only of physicians, but of hospitals, which of course is true only in those rare instances that indicate the untruth of the proposition. The author must have had some qualms himself, because he hastens to assure the reader that he received his information from "the men of the white aprons and rubber gloves—the surgeons themselves." We, of course, don't know who his "rubber-gloved" advisors were, but all of the other 140,000 surely will not allow such uses of their names and bartering of their principles to go unchallenged. We shall be surprised if many of the members of the College of Surgeons do not repudiate some of the author's statements.

As an apology for not giving the names of the physicians who gave him the misinformation about their colleagues, Shepherd makes the statement that:

". . . my readers will please remember that doctors and physicians are under an oath, sacred to their profession, against publicity, so that I cannot use their names."

Physicians will, of course, smile when they read that statement, which to the unsuspecting general reader appears plausible. Surely a casual glance at the newspapers almost any day will convince any reader that all sorts of physicians, both in and out of the College of Surgeons, are being interviewed and are writing for public reading.

We assume that the author is being facetious when he discusses "cutting the greed glands out of surgery." He mentions that some of the handful of surgeons he endorses because they are "controlled" have become so greedless that they refuse to operate on the Chicago newly rich who have the operation habit.

He talks easily and freely about "fee splitting" and "division of fees" as if they were the same

thing. He condemns the physician for his part in splitting fees, but seems to feel certain that the surgeon is protected from blame for his part in a nefarious contract that requires two people to make, by the oath that some surgeons take "on their honor as a gentleman" that they won't split fees. It would be interesting to know if Mr. Shepherd believes that an oath changes a man's heart or even his conduct. If he does, he must feel lonesome in this workaday world.

Methods for the honorable division of fees where more than one physician has contributed service in earning the fee are provided for in the principles of ethics of the American Medical Association. Obviously, each physician is entitled to just the proportion of the fee he has earned, and this division must have the patient's approval. Obviously, any portion of any fee going to anyone who has not earned it is dishonest and forbidden by medical ethics—this is so-called "fee splitting" as distinguished from honorable and honest "division of fees." Of course, anyone who believes this dishonest "fee splitting" can be controlled by an oath made "on the honor of a gentleman" is inadequately advised of the methods of dishonest people.

One of the most obviously deceptive statements in this article is, "medical schools are recommending their students for internship in the minimum-standard hospitals." It would have been easy for the great surgeons the author says he consulted, as well as those the editorial note says have read and approved the article, to have told the truth, that the ratings of hospitals for internships were made and controlled by the Council on Medical Education and Hospitals of the American Medical Association and not by the American College of Surgeons, as implied in the article.

But why go on? Most physicians must have read Shepherd's article, because the editor of the Journal has never before received so many protests from angry men about any other article denouncing physicians unfairly, unjustly and, in part, untruthfully.

Of course there are instances of unnecessary surgery; of "fee splitting"; of physicians attempting more than they should with or without the knife; of over-charging, but they are not the rule, and such an onslaught upon the honor, honesty and integrity of a great profession shall not go unchallenged.

If reports to official medical organizations from their own members are true, dishonest methods occur proportionately among the 6000 odd surgeons who have pledged themselves "on the honor of gentlemen" that they would refrain from these nefarious practices as they do among the other 100,000 odd who have not taken the oath.

BROADENING OUR MEDICAL HORIZON

Elsewhere in this issue of the Journal is published a teaching innovation by the Department of Medicine of the University of California Medical School. In a letter William J. Kerr, head of the department, says that the object of this new method of teaching is to better prepare the student in the art of medicine, economics, ethics, and citizenship responsibilities.

Certainly, no one should know better than successful alumni the importance of this step, and they will know what to teach and how to teach it.

Let us hope that somewhere in their curriculum, as well as that of other schools, provision will be made to teach medicine as a service-loving vocation where wealth cannot be expected and where all service is consecrated.

"THE GORGAS IDEA"

Physicians everywhere are much interested in having the splendid services rendered to humanity by the late Dr. Gorgas recognized by some fitting monument to his memory. Franklin Martin of Chicago, who has been asked by some of those interested to canvass sentiment, was recently in California on that mission. He was entertained and spoke in Los Angeles and San Francisco.

On Wednesday evening, January 13, local fellow members of the College of Surgeons entertained the visitor at dinner at the Bohemian Club. After dinner Martin presented his tentative program for the development of the "Gorgas Idea" to a large audience of physicians at the San Francisco County Medical Society hall.

The subjects of "Standardization of Hospitals" and the proposal to extend "standardization" to all other agencies of medicine, including medical books and what not, was explained and commended. After indicating also the necessity of more and better organizations of physicians who would assume leadership in medical and public health matters, the speaker struck a responsive chord when he proposed a "Gorgas Foundation" as a living monument to the memory of our departed colleague, rather than the usual monument of brass and stone. It was pleasing and gratifying to physicians to hear reviewed the splendid work of Gorgas and the analysis of the great service he rendered in so many fields, but particularly in holding the medical services to our men during the war in the hands of those adequately educated and trained to give the best that medicine had to offer.

The fundamental idea of the development of the "Gorgas Idea," Martin stated, is to give to every individual the heritage to which he is entitled—Good Health—by means of:

Scientific research into the cause, prevention and cure of disease;

The application of such preventive and curative measures as may be necessary under the supervision of the leaders in scientific medicine;

Save to the world the present economic loss in human resources from preventable disease;

Prevent the stupendous economic loss resulting from sickness, ill-health and preventable deaths;

By transforming disease-infested localities into fertile and productive areas, increase the wealth of the individual and the nation.

President Wilbur, W. E. Musgrave and Celestine J. Sullivan were called upon by Wallace I. Terry, chairman of the meeting, and in speaking informally expressed the fullest endorsement of California med-

ical men in any wise movement to honor the memory of Gorgas.

President Wilbur obviously expressed the sentiments of the audience when he disagreed with Martin as to the alleged value of "Standardization" of hospitals and other medical agencies. He endorsed the position of the growing number of thinkers and writers who are not only pointing out the blighting effect "Standardization" has had and is having upon many movements that should be progressive, but that it is an important factor in forwarding the molding into common standards of mediocrity of vast throngs of people.

President Wilbur said that it was not "standardization" that the world and worldly things needed, but a return to individual initiative, activity and purpose fostered by education and sharpened by competition.

Musgrave agreed with Martin that medical leadership in all things medical was much to be desired, but that multiplying organizations was not the way to get it. Nationally and otherwise we are overorganized now and what we need most are "mergers" and not more new organizations. It is utterly futile to talk of national medical leadership with some two score national organizations of medical agencies and each one pulling in a somewhat different direction. It is equally futile to talk of State or more local medical leadership with dozens of organizations pulling at different angles and in which the election of new leaders annually changes the direction of force even in the same organization.

We are not headed toward medical leadership, but toward several medical professions and with mixed policies calculated to produce a slowing up of medical progress. "Standardization" of this or that medical agency for this or that purpose by this or that minority group is the best illustration of how that much desired leadership has gotten all in motion, but not the motion that means progress.

Celestine J. Sullivan, executive secretary of the League for the Conservation of Public Health, said: "One idea expressed by Gorgas could and should be applied effectively for the solution of our present diploma mill and quackery problem. When the question of admitting chiropractors, osteopaths and other members of the countless cults to the Medical Corps of the Army came before Surgeon-General Gorgas, he diagnosed and treated the problem in the same able way that he handled an epidemic. Although there was great political pressure brought to bear upon Gorgas, he did not compromise. He said: "A scientifically educated physician is at liberty, and it is his duty to employ any method of treatment whatever which he believes will benefit his patient. The best safeguard against preventable deaths is a good medical education, and we will require that any man coming into the Medical Corps shall have the degree of M. D. The admission of chiropractors, osteopaths and similar cultists would be regarded, and justly so, as lowering the standards, education and professional, of our Medical Corps."

The League for the Conservation of Public Health, in its Hospital Betterment work, has put this important Gorgas idea into practical effect in all representative hospitals of California. No hospital today worthy of the name will admit to its staff any of the cult representatives which Gorgas excluded from the Army Medical Corps for the good of the service. The present newspaper discussion of diploma mills and their quackish products, and the spectacular prosecution of a few itinerant quacks, will have no more effect upon solving the quack problem than would Gorgas have had in cleaning up yellow fever if he went to Havana and Panama with a fly-swatter and killed a few pestiferous mosquitoes.

Gorgas diagnosed the problem of quackery correctly when he said it was an educational problem. And, it is obvious, that the prevention and cure of disease will have a heavy handicap until all those who are licensed to treat the sick are qualified to do so by education.

ADMISSION OF PATIENTS TO HOSPITALS

The latest of the periodic attacks upon the San Francisco Hospital again calls attention to an important problem in hospital management, namely, that of who should be responsible for the prompt admission of patients and who should have authority to refuse any but first-care service as a charge against the city and county.

San Francisco formerly had a very unenviable reputation for excessive red tape and prolonged delay in the admission of sick people to her hospitals. This reputation was carried by seafaring people to the far corners of the earth. Some of it was unwarranted at that time, and most hospitals in this city, and elsewhere in California for that matter, have long since solved their problem, fixed responsibility for admission in the hands of one person, in such a way as to insure the prompt first care of every sick person who applies.

We are not informed as to the details of the present San Francisco City and County Hospital situation, but we do say most positively that, if authority for admission to that hospital of patients whom physicians believe should have hospital care and who are unable to pay for it is not limited to the social-economic diagnostician, subject to review by the director of the hospital and no one else, there is something wrong with the admitting system. It is, of course, entirely within the province of the Board of Health, as the governing body of the hospital, to lay down policies and general rules and regulations and designate an executive to see that they are carried out. Beyond this point neither the board nor any officer of the board should go.

The importance of a careful selection of the right social and economic diagnostician cannot be overemphasized. Neither can we overemphasize the full co-operation and support she should have in her work so long as she is right, and when she is wrong too often, the position should be vacated and another appointment made.

We are not disposed to believe much of the current comment to the effect that political favor has to do with the admission or rejection of sick people by this great hospital, as it does in some other county institutions.

Two points, and two points only, should govern the admission or rejection of patients by the hospi-

tal: One is, that the patient should be competently decided to be unable to pay the cost of hospital care, and the other is, that the patient should be suffering from conditions that the examining physician believes may be best cared for either temporarily or permanently in a hospital. The obsolete, unfair rule which requires that the patient shall be a resident within the political unit for six months or a year before being eligible to admission to most county hospitals ought to be abrogated. From the standpoint of public health and the protection of other citizens of the city and county, the mere fact that the patient is within the political jurisdiction should be all the evidence of citizenship required. We, of course, are fully advised of the complaint that some of these people are loafers who migrate from one county or State to another with the changes of climate. Nevertheless, they are human beings and we are not prepared to endorse rules and regulations which cause neglect or delay in their treatment, this not only in the interest of the wanderers' health, but as a protection of the public health against the various infections these patients so often carry.

TAXING PHYSICIANS UNFAIRLY

There are Federal, State and municipal taxes upon physicians that are unfair and discriminatory.

The Harrison Narcotic Law—Every physician who dispenses certain narcotics must pay a special tax of $3 toward the support of a bureau charged with the duty of checking up on the doctor's honesty. Actually, the bureau goes much further: It provides a complicated and frequently changing system of reports that require a great deal of the physician's time to render and which are needlessly inquisitorial. The whole government machinery for the administration of this law has become as complex and expensive as the average government bureau becomes when given time and plenty of money. The autocratic attitude of some of the enforcement officers is not calculated to make better citizens of physicians. A bill reducing this tax was introduced in the last Congress by Congressman (doctor) J. J. Kindred of New York. We are informed that similar legislation will be proposed in the Sixty-eighth Congress.

State Taxation—California has for several years had a law which requires all physicians to pay to the Board of Medical Examiners a $2 registration tax. The original law provides that this fund shall be used by the board for its expenses in enforcing the provisions of the Medical Practice Act. This law has always been considered by practically all physicians as unjust and unconstitutionally discriminatory. However, so long as the money was used in safeguarding the public health no concerted action looking to repeal of the law was taken. Now that, under the "efficiency and economy" program of the State Government, these funds are turned in to the State treasury and used, at least in part, for the general purposes of government, it is about time for concerted action. Legal action against the payment of this tax bringing out diversion of the funds from the use provided in the original law would probably meet with public approval and might attain a favorable verdict in court. In any event, the subject may well be considered by the California Medical Association with a view to asking the League for the Conservation of Public Health to promote repeal legislation.

Municipal Taxes—An ever-increasing number of municipalities are placing a special privilege tax against physicians. Usually these are flat rate assessments and some of them are very high. This form of special taxation is almost universally resented, the reasons being that the physicians always have given their time free in the medical care of the poor of the municipality. They object to rendering free service and being taxed at the same time. In any municipality or other government unit the amount of service given freely to wards of the unit is many hundred times the amount of the tax. That the government unit should either pay for the physicians' time given to them or relieve the physicians from special license taxes will be endorsed by all right-minded people.

It is irritating, unjust proceedings of this character that may some day force physicians into strong organizations.

TREATMENT BY NEGLECT

Theodore Diller, Pittsburgh (Journal A. M. A., December 22, 1923), is of the opinion that there are patients who are examined far too much. The self-centered psychoneurotic delights in examinations, re-examinations and more examinations. And in these days of many clinical procedures and manifold laboratory tests there is great risk of over-examining certain of these psychoneurotics. There is a judicious neglect which the physician makes in his visits. It is extremely important and necessary that enough time be given to hear the patient's story; but it is a mistake to spend time in hearing undue repetitions of this story. While the first visit may be of an hour's duration, the next one may be half an hour; and other visits of a minute and a half may be most appropriate. There are times when the patient is much better visited once a week or once in two weeks rather than every other day. There is a type of psychasthenic patient that leans on drugs, on appliances or members of his family, and on his physician. He does the maximum leaning instead of the minimum leaning, and does not look forward to the time when he will not lean at all. The job of the physician is to lead him to lean less and less and, if possible, to walk alone and not lean at all.

Diller's remarks will crystallize one important truth in the hearts and minds of true physicians. The author makes no claim that he is advancing anything "new" and he no doubt realizes that most good physicians are practicing what he preaches. More should do so and some undoubtedly will be recruited to more effective service by the able presentation of the subject.

Thoughtful minds in running around and behind the article will readily see many applications not mentioned in the article, one of the most important being that many communities are doing in a wholesale way just what Diller cautions against, by creating so much machinery of such wide variety for the examination and treatment of the sick that active competitive methods must be utilized to get "business" for them. Almost any "progressive" community is now so well supplied with medical "mills," usually operated by non-medical people, that "grist" must be reground in order that they can all make a showing.

Whatever else the growing system does, it insures plenty of just what Diller's article cautions against.

Medicine in the Public Press

Why Not Build Highland Hospital?—One of the most curious and certainly the most expensive method yet reported in financing and building a hospital is that now dragging its weary way along in Alameda County. Periodically, for the last several years, newspapers have given much space to what is planned to be done. Too much of the publicity deals in futures.

Several years ago a site was purchased and plans approved for a new County Hospital to cost some $3,000,000. A hospital was much needed then and is more needed now. Whether the county needs or will support a $3,000,000, over 500-bed hospital, if or when it is built, remains to be seen. It will cost easily $900,000 a year to operate a real hospital of that size if it is completed now. The longer the delay, the more it will cost, if the accounting system takes cognizance of the interest on the various sums that have already been spent, together with the interest on tax-collected money or interest and amortization charges on bonds, if any are to be sold.

Can you imagine any business man starting out to make a three-million-dollar investment by putting in some one-third or one-half million dollars a year with no hope of receiving any returns either in money or service until after the last installment had been paid? Why tie up hundreds of thousands of dollars a year for year after year with no return in service or money and no hope of any for years to come? If installment methods had to be followed, why were installment funds not allowed to accumulate and draw interest until enough was on hand to build? Or at least complete each unit and put it into service as finished? The interest on these installments over the years already gone by and those apparently yet to come would have been a pretty penny. With funds available, less than two years would be ample time to build from the ground up. Why not give the long-suffering taxpayers something for their money if not by giving better care to more people who need it, then at least by accumulating interest on tax money until it is needed?

Distinguishing Between Facts and Propaganda in Health Work—When Pearl published that interesting book upon the Biology of Death, in popular parlance he started something. Particularly when, to prove that other elements than the work of health agencies have been instrumental in reducing the death rate from a considerable number of causes, he submits the following argument: He compares the decline in the mortality between 1900 and 1918 in two groups of diseases—A and B. The first group, A, are the so-called "controllable" diseases and include: (1) tuberculosis of the lungs, (2) typhoid fever, (3) diphtheria and croup, (4) dysentery. For them, the claims of the health people have been made. The second group, B, include four so-called "non-controllable" causes of death, namely: (1) bronchitis (acute and chronic), (2) paralysis without specified cause, (3) purulent infection and septicemia, (4) softening of the brain. No one, he says, would claim that the public health program has in any way been responsible for the decline in these death rates. He then shows that the rate of decline from year to year in both groups A and B has been about the same during this period of eighteen years.

The conclusion is, therefore, obvious that if conditions can decline without the intervention of public health work, then public health work cannot assume credit for the decline in those conditions with which it does deal.

To clinch the argument still further, Professor Pearl then compares the decline in the mortality from two diseases—namely, typhoid fever and diphtheria—in two groups of countries, A and B, A having a highly developed public health and sanitation program and B not having such program. Under the first head are included Australia, Austria, England and Wales, and Germany; under the second head are included Italy, Jamaica and Rumania. Again, the writer indicates that the rate of decline in the death rate from typhoid fever and diphtheria has been about the same in the two groups of countries.

We are not at this moment discussing the merits or demerits of Pearl's statements, but rather want to point out the sudden and emotional outbursts of protest that come from so many sources. It is interesting to glance over a collection of the criticisms and to note how closely their authors are connected with one or more of the numerous organizations who have been termed "job initiating" and "job protecting" in their primary purposes.

Louis I. Dublin (The Survey) says: "Dr. Pearl has a real complaint with those who claim the 'entire decline in the death rate which has occurred has been due to the efforts of health officials, whether conscious or unconscious, as is often asserted and still more often implied in the impassioned outpourings of zealous propagandists. The open-minded student of the natural history of diseases knows perfectly well that a large part of the improvement in the rate of mortality cannot possibly have been due to any such efforts.' And in elaborating this complaint he is inclined to belittle the value of activities which health workers consider unquestionably effective and even to imply that some, which, like the tuberculosis campaign, are sacrosanct, are of little if any value."

Pearl is only one of the many who are beginning to speak forcibly of the all but negative value of the so-called statistics that are in reality propaganda by half-baked so-called health organizations. If health work is not put back into the hands of persons educated and trained in medicine there is real danger that legitimate, well-directed efforts may suffer because of the uncontrolled vaporings of this or that incompetent "uplift" or public health or anti-something organization.

Who is a Child, Medically Speaking?—The problem raised by the query is one of some magnitude in medical school faculties. Attempts at its solution cause more controversies and heartburnings among medical teachers than the public realizes, or, for that matter, more than either the public or the medical profession are particularly interested in. Nevertheless, it is to a degree everyone's problem, because as the young medical student is taught, so is the physician likely to practice.

The first phase of the problem is its lower register, as it were—the boundary line where the obstetrician leaves off and the pediatrician picks up the problem of the infant's health and medical care. Many obstetricians consider the child in their field from conception until one or more years old. Many pediatricians expect the infant to be handed to them at birth, and some of them are following the welfare group in claiming the child's care before its birth, leaving the mother detached, as it were, to the obstetrician.

Silly you say, and so it is; but if you think it isn't a live question, go to almost any medical school and get the various reactions.

Then there is the upper register, or when does a child cease to be a child, medically speaking, and pass from the field of pediatrics to that of adult medicine. Pediatricians have not, as a rule, been staying put on the answer. They have moved the age of childhood, or, more correctly, the pediatrics age, up until they now claim it extends to 16 years, and some even to 18 years of age.

Silly you say again, and again you are right; but so long as medical students are turned out to practice with these and a dozen other more or less unimportant controversies ringing in their ears, just so long will there be discord.

These and dozens of other problems have grown and continue to grow out of the ridiculous lengths

to which "specialization" in medical teaching and practice is being carried.

What a splendid service medical schools would render both to physicians and the public by agreeing upon and teaching along some more or less similar lines.

The Second Coming of Coué—The pitiful spectacle of this propagandist's second coming to our country and his recent first visit to California is well summed up by the San Francisco Bulletin when it says editorially:

"The second coming of Emile Coué to America is in marked contrast against the blare of trumpets and the front-page spreads with which he was greeted on his first arrival.

It was scarcely known that he was in America until there was word of his arrival in San Francisco.

Less than two years has sufficed for an almost complete slump in the reputation of one who, for a time, was declared to be one of the world's great thinkers and benefactors.

From comparative obscurity as an apothecary in Nancy he was suddenly raised to a notoriety that was mistaken for the beginning of enduring fame.

Miraculous cures of all manner of diseases and ailments were said to have been wrought by the mere repetition of his supposedly magic words.

Nor is there reason for doubting that in many cases cures were actually effected. Many complaints real enough to the victims themselves are no more than the result of a disordered imagination, and when there is actually nothing the matter with a patient Coueism and similar isms are very often effective.

Their weakness is that the cures do not often last. The patient comes to realize not that his ailment was imaginary, but that there was self-deception in the cure. The old abracadabra will not work, and a new one must be found.

Coué gave the world a new one when he devised the formula, 'Every day in every way I am getting better and better.' It was so catchy, so simple to remember, that everybody in forty or fifty languages was repeating it.

But there was a catch in it. Very soon the thing was seen to be very much like trying to lift oneself up by pulling at one's bootstraps.

Of course, all this says nothing of the personal magnetism of M. Coué. That is a force admitting of no disputes, but personal magnetism of his kind must be personally or directly applied, and such a man cannot treat because he cannot reach all mankind.

If there is anything serious the matter there is nothing like calling in the regular physician."

Prayer as a Therapeutic Agent—An article on this subject (Christian Advocate) has been sent in for comment in this column. The minister who wrote it feels that the ministers are working in a complementary manner with the doctors in the treatment of physical diseases, but feels that the doctors do not assist the ministers as they should in the ministers' field of healing in mental and soul sickness.

There are two classes of exceptions to this general conclusion suggests the minister. One class is the psychologists, whom the author considers followers of the most popular science of healing. He cites as most brilliant studies of the subject particularly the books called "Outwitting Our Nerves" by Josephine Jackson and Winbigler's book on "Suggestions." He is particularly pleased with the statement in the latter book that "the day of belief in the healing power of drugs is passed." Thus we have the master key to the author's mind.

The author praises one group of physicians, among whom he classes Hyslop of England and R. C. Cabot of Boston as great representative leaders. The author quotes Cabot as saying:

"Healing comes to some individuals directly through prayer, I am sure. I use it in my practice and rely upon it more often than medicine. . . . If I had no material means at hand I should use prayer alone, with confidence that it would work the cure."

So that's that.

Intellectual Giants Disagree About Diet—The ideal health-insuring breakfast discussion recently so warmly championed by so many people, each with his own ideas upon the subject, is now being heatedly argued in England. Recent Associated Press dispatches of a controversy between two eminent men of letters show how we agree about what to eat:

Bernard Shaw and G. K. Chesterton have locked horns in another controversy—whether Great Britain ought to brighten its breakfast tables with importations from America, such as grapefruit, orange cocktails or other fruit dishes.

Shaw, a vegetarian, says the suggestion of fruit dishes makes his mouth water, but the roast-beef-eating Chesterton contends that if there is one thing that would justify armed assault on the United States it is "this attempt to introduce the American diet on the British breakfast table."

Their controversy was inspired by a little piece sent to the newspapers by Peggy O'Neil, the American actress, who is playing in London, in which she said the English breakfast was a terribly dull and depressing thing, and begged for the brightening influence of fruits.

Rushing to the defense of his homeland fare, Chesterton declared Americans should never raise the subject of breakfast in the presence of Englishmen.

"The Americans sleep in hothouses," he said, "and wake up so thirsty that they are obliged to devour quantities of fresh fruit and drink gallons of ice water and alcohol, but it isn't breakfast. If there is one glorious thing in England which must never die it is the breakfast of bacon and eggs."

"Why bacon," Shaw inquired. "Do the Jews never enjoy their breakfasts?"

"Mr. Shaw would have been a very intelligent man," rejoined Chesterton, "if only he had always had boiled elephant or tiger for his morning meal."

"Pardon me," Shaw retaliated, "Mr. Shaw is a very intelligent man. Methuselah could hardly have been expected to go on eating pigs and pullets every morning for 969 years. Manna will be the food of the future. Must we always be condemned to slops and marmalade? Now, if Chesterton had attacked buckwheat cakes and molasses I should have sympathized, but fresh fruit! My mouth waters."

Lunatics of Literature—"Psychiatry, or morbid psychology, is the most popular branch of medicine today with the layman, and the most unpopular with the physician," says Joseph Collins in a discussion of Lunatics in Literature (North American Review). "Yet most of the stories of the past ten years would testify that their writers had never set foot in an institution for the insane nor made the acquaintance of any of the inmates.

"No one has ever been able to define insanity satisfactorily. There is no reason for believing that it will ever be accomplished. Nevertheless, the term will continue to be used derogatively and diagnostically. Insanity results in, or is the result of, disorder of personality. It is manifest in thought or in conduct, or in both. The individual whose personality disorder is confined to thought is not considered a lunatic by the law or by his neighbors, although he may be the victim of definite mental disease. He does become a lunatic when his conduct is at variance with that which we recognize as normal, proper, good, safe, legitimate."

After a further most interesting and enlightening analysis of some of the old and recent lunatics of fiction, Collins says: "It is desirable that we should become saner both as individuals and as nations. That we are becoming less so as individuals the statistics of institutions for the insane would seem to prove; that we are becoming less so as nations needs no proof, but if it did I could readily supply

it. We get the Laocoon grasp on disease when we know whence and how it comes. We await this information in regard to insanity. Meanwhile it only throws sand in the gearbox of the available machinery for finding out about it to create literature in which established facts are misrepresented. If we are going to have insanity in fiction, let us have the real thing."

Chiropractic Fountain Head Addresses Sciots—"Early to bed and early to rise,
"Work like mad and advertise,
"And you will be healthy, wealthy and wise,"
was the keynote of B. J. Palmer's address recently to the Sciots of San Diego. His address ranged from a forceful exposition of American business methods of firm, community and national advertising, and concluded with a brief but stirring discourse on the aims and purposes of Masonry. He emphasized and re-emphasized the importance of honesty in propaganda and advertising. Some said that indeed he did "protest too much."

Plastic Surgery Enters Beauty Specialty Field—An international clinic composed of British, French, and American surgeons has been opened in London. In addition to doing the recognized plastic surgery, this clinic proposes to frankly enter the field now pre-empted by beauty specialists.

Public Health Nurse's Report—In a recently published and otherwise commendable monthly report of a public health nurse, we find these illuminating items: "Pupils found defective, 84; defective corrections, 39; minor treatments, 97."

Definite practice of medicine is being more and more engaged in by nurses and other unlicensed and inadequately educated persons. It does not augur well for the future of nursing, and surely nurses have enough to do in the field they have been trained and educated to fill and in which their services are needed.

Shall Clerics Practice Medicine?—The Church of England has had a distinguished committee of church authorities and physicians working on this problem for some three years. The committee draws some interesting conclusions, some of which are:

1. It is not the function of the Church to apply its means of restoration to no higher end than the recovery of bodily health. . . .
2. No "sick person must look to a clergyman to do what is a physician's or surgeon's work to do."
3. The committee recognizes the duty of the Church to combat disease, and declares that it has a certain field in which it can act properly and advantageously.
4. The report, as it is summarized in the New York press, recommends, in effect, that methods hitherto confined to the Church of Christ, Scientist, or to psychoanalysts, should be established as part of the Anglican practice, with this distinction, that, while the majority of the faith-healing cults disdain the medical profession, the Church of England committee is fully mindful of medical science, and proposes that the direct power of moral and spiritual suggestion be allied with scientific knowledge. No separate or distinct ministry of healing is planned, nor is licensing of individual healers or official recognition of healing societies recommended.
5. The report severely scores the amateur healers practicing psychology as a treatment for disease, declaring that the committee "cannot be blind to the fact that the exponents of some of these methods have departed from legitimate fields of scientific investigation and have propagated views that are subversive both of moral and religious principles."
6. No case of the cure of organic disease was found by the committee.

The Better Health and Longevity Association—Under this name there has recently been launched an association with headquarters in Chicago for the promotion of periodic medical examinations of all adults.

"Americans have the best teeth in the world," said Edward H. Ochsner, president of the Illinois State Medical Society and one of the organizers. "They have them because they have the best dentists and have been taught to have their teeth examined at regular intervals.

"Our new association will sponsor physical and dental examinations for every adult in Illinois, at least once a year. Sickness and contagion will be greatly decreased, we believe, and millions of dollars will be saved to the laboring man, the employers and casualty companies," he declared.

"If we can reduce the average day's illness three, two or even one year, millions of dollars will be saved," said Ochsner.

Periodic medical examinations, if wisely done and adequately followed up with carefully prepared reports of findings and treatment, would do as much for the health and happiness of all people as any other health-improving service yet suggested.

The real reasons as to why children are not included in the scope of the various organizations and the thousands of independent physicians engaged in this work ought not to be left out of consideration. Actually, children need the examinations as much as do adults.

Many physicians are missing some wonderful opportunities in this field of medicine, opportunities to render a fine service for their communities and increase their own income at the same time. When the work gets into the hands of a comparatively few clinics, health centers and other groups controlled by non-medical people, we may wake up and begin to call for action.

The opportunities are good to promote this service in California as it should be promoted in the best interests of physicians as well as other citizens. But that opportunity is not going to last long—not over another year or two—if we can read the signs of the times aright.

Is this Class of Inadequate Medical Practice Necessary?—Items similar to the following are a feature in all news-clipping services:

"The school nurses are at present performing most valuable services to the community, in examining school children periodically and suggesting treatment. They can be called in by inexperienced school teachers in case of illness among pupils, and thus by a quick diagnosis are a force in combating against epidemics. In the rural districts these nurses go directly into the homes where they are often able to find the direct causes of the child's ill health."

It is perfectly obvious that a systematic attempt to limit the practice of medicine to the treatment by drugs of disease is being made. It will then be possible to assign the more important services of physicians in preventing, diagnosing, and even the treating of disease by any method except poisons, to any group of nurses, teachers or others who are trained for their own legitimate work but not to practice medicine, which many of them are now doing.

Yes, We Have No Oranges—Since the comparatively recent dawning of the day when everyone is a "doctor" and the kind that talks at that, we are "larning" a lot we did not before know. Thus, during the last few weeks, we have seen the spectacle of the nutrition "experts" of a great commercial organization asserting that candy is not fattening.

About the same time other groups of specialists have "discovered" that oranges may produce as beneficial results as milk in food for school children.

These are only two small samples of what we may expect when everyone is "educated in medicine."

This So-called Health Education—A paid employe of the department of education uses your taxes to pay her salary while she broadcasts this erudite medical wisdom. "Health is coming to be generally

recognized as an essential and primary objective of education. What can schools do to produce healthy children? They can provide healthful surroundings that will promote, not menace, the health of children. They can give instruction in matters of health, and recognize the fact that instruction is of little value unless it functions in habit of healthy behavior."

If you can beat that, we would like to hear from you.

Physical Examination of School Children—We were surprised the other day to see the broadcasted news-story that the director of physical education was going to have some 50,000 school children examined before they entered school this year. That was a bold statement for a government employe to make in California. Sure enough, next day the statement was modified to mean only those children whose parents wanted the examination made. At the same time the papers published an interview with the chairman of the Christian Science publicity committee endorsing the educator's "modified" statement.

If it were intended that the examination of school children should be carefully made by educated physicians and their findings given to parents as permanent records for the information of physicians who might be called upon to treat these children in the years to come, it would have been a good thing to encourage. But if the examination was to be the usual one, made by nurses, teachers or other technicians, then for once in our lives we thank the Christian Scientists for stopping the mockery of scientific medicine.

Minute Men of Medicine—What appears to be a worthwhile movement for the improvement of public health had its origin recently in Philadelphia. The movement consists essentially in the mobilization for epidemic and other medicine emergencies of the physicians of the city as associate health officers. By co-operation and co-ordinated action between the medical society and the city health officer, some thousands of the members of the county society now belong to the organization.

The health officer naturally feels more comfortable with the people protected against lack of medical service during any emergency. It is a striking situation for a health officer and executive officers of a county medical society to be provided with such a reserve army of health—each member always ready to answer the mobilization call.

Good as Far as It Goes—Under a subheading of, "Doctors Practicing Under Bogus Licenses are More Treacherous Than Bandits," the Palo Alto Times says editorially:

"May success attend the crusade launched in this State and elsewhere over the country to discover, expose, and discredit practitioners in medicine and other lines of healing who are practicing under licenses fraudulently secured. The highway bandit is not nearly so dangerous as grafters of this sort. The bandit's victims are fewer, for one thing. Moreover, they are conscious of the fact of being mistreated and robbed, whereas the deluded clients of the healing quack are lured through false promises, either expressed or implied, and place themselves completely at the disposal of a combination of ignorance and crookery.

"The most eminent and skilled physicians are ready to admit the limitation of their science. The quack, however, is usually known to make the most extravagant guarantees. Gullible individuals with no standards of personal judgment are found in large numbers being robbed of the money they pay over in fees for treatments supposed to represent wisdom and skill secured through adequate study and legitimate practice. The law must protect people against this sort of treachery, just as it must protect them against burglars and thugs."

This is as good as far as it goes, but it only scratches the surface. There are several licensing boards in this State, and under the law they **must** license persons inadequately educated or trained to practice the healing art. It is the license requirements fixed by law that are at fault.

Then, too, there is that largest group of all among quacks—those who do not even bother to secure the license that is too easy to get. If you wish to find these, look at the signs and advertisements.

The medical profession has introduced two bills into previous legislatures that would correct the whole situation: One, known as the Medical College bill, passed the Senate and died in a committee of the lower house unfriendly to scientific progress. The "Doctor" protection bill passed both houses of the last Legislature all but unanimously and was vetoed by the Governor.

Both bills will be introduced again.

Voluntary Health Insurance—The California and Hawaiian Mutual Benefit Association consisting of the employes of the California and Hawaiian Sugar Refining Corporation is undertaking, with the co-operation and assistance of the employers, to establish a mutual fund for the payment of wages lost during sickness.

The corporation carries, and will continue to carry, the expense of securing the benefits of the Industrial Accident law to all employes. This, however, does not take care of sickness not coming under the provisions of the accident law. The old employes' hospital association which has existed for some time among the employes will be merged with the new association.

There is a chance of much helpfulness growing out of voluntary organizations of this kind, but there are many more chances that it will be found to be impracticable. It takes more than a slogan to run a hospital, and it takes more money and better organization than has yet been provided to operate successfully an adequate and complete medical service under the name of a hospital association.

Recovery From Mental Sickness—Mr. Walter D. Wagner, director of State hospitals, according to press dispatches, announces, "Permanent recoveries are effected in the cases of 40 per cent of all patients sent to California's various institutions for the insane." It is further stated that these figures have been arrived at "following exhaustive investigation of conditions in the hospitals."

Forty per cent and any other per cent of cures is not enough, so long as well known and approved methods of treatment are not utilized. The percentage of cures can be further increased by removing many of the associated physical diseases so important both in causing and aggravating mental sickness.

Focal infections from bad teeth, tonsils, chronic inflammatory processes in other places; old ruptures; gall-bladders full of stones and inflamed; metabolism diseases; chronic heart, kidney and circulation disturbances, and many other conditions which undoubtedly exist, can be, and should be, diagnosed and ameliorated.

Scientific dietetic, good surgery and good medicine, including various forms of physical therapeutics, has markedly increased the cures in other places, and there is not the slightest question of doubt but what they would increase Mr. Wagner's percentage of cures most decidedly.

Of course, to do these things requires more laboratory, X-ray, medical, nursing, and other minimum requirements of **any** hospital for any class of patients anywhere, both to increase the accuracy of diagnosis and the quality of treatment, than is now part of the services of most state hospitals. But this cannot be had at a cost of 62 cents a day per patient. More money wisely spent will increase the number of "cured" patients—not cases—that will go back home to usefulness.

Three Aids—Under this headline the San Diego Tribune says editorially:

"Where stock swindlers rob men and women of

scanty savings, 'fake' medical practitioners rob them of something inestimably more important—health, happiness, peace of mind, and sometimes of life itself.

"The contemptible nature of the 'fake' healer is inherent in his business. The stock swindler appeals to human greed. The quack doctor preys upon pitiful and appealing human necessities. Ignorant people who are sick are vastly more helpless than intelligent people who are sick, and it is upon the helpless class that the diploma-mills and the irresponsible "doctors" depend for existence.

"The public is not without blame, both in the case of the swindler and that of the spurious 'doctor.' People who have sense enough to make use of banks and legitimate investment houses don't waste their savings with 'wildcat' concerns. People who have sense enough to investigate the healing agencies available to them can easily determine whom to trust —can easily learn which practitioners have built themselves up into professional competence through long study and successful practice, and which are merely fly-by-night money-grubbers.

"It is true, too, that the medical profession itself must come forward and help protect the ignorant against themselves. It is as important to prevent people from becoming the prey of irresponsible quacks as it is to prevent them from contracting avoidable diseases. Now as never before, the honest doctor must insist upon the very highest ideals within the profession, the very fairest, and most honest and most enlightened policies toward the general public. Part of the craze for irresponsible healing methods is due to public ignorance; but part of it—and this fact ought to be faced squarely—is due to outworn policies of secrecy and 'hokum' within the medical profession.

"Education of the public, education of the healing professions and rigid requirements under the law, will—all three together—do much to protect ignorant and ailing people from those who would make money from human suffering."

Mergers in Health and Welfare Agencies—"Mergers" in health agencies now have the center of the stage, very much as unmerging had a few years ago. We are a restless people who are continually making governmental changes in policies in this or that class of services because, whatever the plan in vogue, it is not successful. We continually refuse to recognize the fact that more serious, energetic work by government personnel, with more loyal support of effective agencies, is the important element in efficiency, but not necessarily in popularity.

There is no doubt in the mind of any thinking student but what overorganization, with too much organizational independence, classification of government agencies from the standpoint of political expediency, and the enactment of too many silly restrictive laws, are responsible for much government inefficiency in many fields. The health field probably heads the list, nationally by states and locally, in carrying political subdivisions of indivisible services to a ridiculous extreme.

Several legislatures are as usual battling with the ever-present problem of "merging" or "unmerging" their health services. Governor Smith of New York recently sent a special message to the legislature, which contains matter that should interest the people of all states. Among other things he said:

"The last Legislature was willing to place Raybrook Hospital under the Department of Health, but was unwilling to place the independent and unco-ordinated Hospital for Crippled and Deformed Children and the Institute for Malignant Diseases in the same department." . . . "I must again call your attention," the Governor continued, "to an important group of State activities which today are administered by a confusing, duplicating series of agencies—namely, those dealing with the welfare and institutional activities of the State. State welfare and institutional activities are hopelessly scattered and are subject to so many overlapping inspectional and supervisory agencies that when anything goes wrong it takes a special investigator, under the Moreland Act, several months to fix any measure of responsibility. Any planning of a positive, humane and forward-looking character is entirely impossible under present conditions."

The trouble with all these much-to-be-desired mergers of health agencies in whatever State they are undertaken is, that they are made from the standpoint of political expediency, usually by people who know political values, but little of service values. Some day, let us hope, some State will really merge its health agencies from the primary viewpoint of effectiveness of service by persons who know the various angles; and when this is done, other States will follow.

Trapping the Nerve-Impulse—Under this attractive catch-phrase title, Professor E. Newton Harvey of Princeton writes interestingly (Scribner's) about a subject not sufficiently studied by physicians or others. The story of facts and theory is so well told that only the advanced student of physiology will recognize where the one leaves off and the other begins. It is well worth any physician's time to review his neurology by a careful perusal of the article.

Red Cross Clinics in Marin County—It is reported that the Red Cross of Marin County will re-establish the pay dental clinic at 214 Fifth avenue, San Rafael.

"Well Baby" clinics are also scheduled for San Rafael, Larkspur, Corte Madera, Mill Valley, and Fairfax. Babies are weighed and measured and all sorts of free advice given to mothers about the care and feeding of their babies.

It is said that some income for the doctor in these clinics has been arranged for, but that both rich and poor will be prescribed for free.

Is Civilization Self-Destructive?—Most of us accept as a fact, and without question or further seeking of knowledge, the oft-repeated statement that civilization is advancing and that democracy in government and other activities is the outstanding basis of progress.

Some years ago (1910) a Canadian statesman caused quite a stir by defining democracy in government as interim government between monarchies, and otherwise challenged what we call progress as retrograde movement. He cited history to show that no democracy nor democratic civilization had ever lived more than a few hundred years; that these periods were wedged in between periods of more centralized government, and that but few countries had ever repeated the experiment of democracy.

The controversy caused at that time is being repeated over the charge of Mr. Wiggam (Strength, Philadelphia) that civilization as we understand and practice it is self-destructive. He quotes and endorses Stanley Hall's statement that "Man has not yet demonstrated that he can remain permanently civilized." He calls to mind the well-known fact that, in order to maintain a vigorous strain of large fine potatoes, they must be passed ever so often through periods of growth in difficult soil.

"Now, in their breeding qualities men and potatoes are exactly alike. Human beings in a state of savagery are in the same situation as the potatoes that were planted in hard, sterile soil. Every potato in such soil has to fight for its life. The weaklings never get above the ground, or if they do they are killed off. But in the rich soil all sorts of potatoes survive, and they also rear offspring. The strong are in time crossed with the weak. Thus weakness is spread. Feebleness and disease perpetuate themselves.

"Just so, when men are in savagery and barbarism they progress constantly in their physical, mental, and moral qualities. Barbarism is the only process by which men have ever progressed in their natural inborn strength of body and mind; and civilization is the only process by which mankind has ever grown

organically weaker. Civilization is thus the most dangerous enterprise upon which man has ever set out. In the days of his savage state, nature was looking day and night for the weak spot in every man's armor, and without mercy took her toll.

"But what happens when men become civilized? I can best answer this question in the words of Professor Karl Pearson, who said to the British Medical Association: 'You are enabling the deformed to live, the blind to see, the weakling to survive. In our institutions we provide for the deaf-mute, the blind, the cripple, and render it relatively easy for the degenerate to mate and leave their like. In the old days, the hand of nature fell heavily on the unfit. There were no doctors to enable them to limp through life, no charities to take their offspring or provide for their own necessities.

" 'To the honor of the medical profession, to the credit of our social instincts, be it said, we have largely stopped all this. We have held out a helping hand to the weak; but at the same time we have, to a large extent, suspended the automatic action whereby a race progressed mentally and physically.

" 'What will happen if, by increased medical skill and by increased State support and private charity, we enable the weaklings to survive and propagate their kind? Why, undoubtedly we shall have a weaker race.'

"We are anti-Burbanking the human race at every point."

PUBLIC HEALTH SUMMER INSTITUTES

The United States Public Health Service takes pleasure in announcing that, in response to an extensive demand for summer school work in public health, it has arranged with Columbia University, the University of California, the University of Michigan, and the University of Iowa to conduct public health summer schools this year.

The faculties of these various summer schools will include many leading "specialists" of the United States.

The tentative schedule of the courses to be given at the University of California, Berkeley, June 23 to August 2, is as follows:

Epidemiology; Clinics in Preventive Medicine; Elementary Bacteriology; Protozoology (lecture course); Protozoology (laboratory); General Biology; Public Health Laboratory; Public Health Administration Laboratory; The Health Center; Public Health Administration; Physiology (four courses); An Introduction to Psychology; Social Psychology; Problems of Social Mal-Adjustment; Medical and Psychological Problems (in Criminology); The Abnormal Mind; Mind and the Organism; History of Experimental Psychology; Mental Hygiene; The Elements of Nutrition; The Nutrition of Development; The Physiology of Nutrition; Seminar in Nutrition; Advanced Biochemistry; Child Hygiene; School Hygiene; Physical Education (thirty-four courses); Social Hygiene in Public Schools; Principles and Practice of Public Health Nursing; Home Care of the Sick; Health Education; Statistics; Control of Poverty; The Logic of Argument; Public Speaking.

For additional information address the Surgeon-General U. S. Public Health Service, Washington, D. C.

Faraday had but to will it to raise his income in 1832 to five thousand pounds a year. In 1836 the sum might have been doubled. Yet this son of a blacksmith, this journeyman bookbinder, with his proud and sensitive soul, rejecting the splendid opportunities open to him—refusing even to think them splendid in presence of his higher aims—cheerfully accepted from the Trinity House a pittance of two hundred pounds a year.

COUNTY NEWS

ALAMEDA COUNTY

Alameda County Medical Association (reported by Pauline S. Nusbaumer, secretary)—The monthly meeting of the Alameda County Medical Association was held at the Ethel Moore Memorial building, Monday evening, January 21, President Charles L. McVey in the chair; Clarence DePuy, acting secretary. Interesting patients and case histories were presented by Clifford Sweet, Clarence DePuy, Kate Gompertz, and J. L. Lohse.

The regular program was arranged by N. A. Cary.

Observations on the effect of posture in some types of low back pain.—H. H. Hitchcock. Discussion opened by Kate Gompertz.

Osteoarthritis.—F. J. Carlson. Discussion opened by George Rothganger.

Spastic paralysis. Operative and conservative methods of treatment.—O. P. Stowe. Discussion opened by Arthur Fibush.

Vasomotor lesions of the extremities. Demonstration of cases.—N. A. Cary. General discussion.

The president made an appeal to the members for the development of a closer fraternalism, and presentation of case histories and case reports previous to the regular evening's program. J. L. Lohse addressed the meeting briefly on the Doctors' Golf Association. All members of the association are invited to participate in future tournaments. Refreshments were served, and the usual sociability enjoyed.

The annual banquet was held Tuesday evening, February 5, at the Hotel Oakland. After a good repast and an enjoyable program of story-telling, vocal and instrumental music, W. W. Campbell, president of the University of California, the guest of honor, gave a most instructive and interesting address on "Where Do We Live?" illustrated with lantern slides. It was voted a delightful evening by all present.

The regular monthly meeting of the resident and visiting staff of the Alameda County Hospital was held Monday evening, February 4, at the Ethel Moore Memorial building. The program of the evening included:

Importance of Diagnosis in Oral Infection.—S. B. Fontaine.

Acid Base Balance in Metabolism.—H. Rogers. Discussion by Gertrude Moore and Q. O. Gilbert.

Case Reports—Adeno-Carcinoma of Colon with Perforation.—D. N. Richards.

Case of Laryngeal Diphtheria with Obstruction of Bronchi.—Q. O. Gilbert.

The Fabiola Hospital staff held its annual meeting at Fabiola Hospital, January 29. After disposing of the unfinished business of the preceding year, the election of officers for the ensuing year took place with the following result: E. G. Simons, chairman of the staff; H. D. Bell, vice-chairman, and Claire Rasor, secretary-treasurer. Owing to the amount of business and election of officers, there was no scientific program presented.

The Merritt Hospital staff meeting was held Monday, February 4, at Merritt Hospital, with President George Rothganger in the chair.

Tumors of the Breast.—W. E. Mitchell.

Discussion on the subject of "State Medicine."

After a general discussion of these subjects, light refreshments were served.

The staff of Providence Hospital held its annual meeting February 12. The following members were elected as officers for the ensuing year: President, O. D. Hamlin; vice-president, J. R. Fearn; secretary-treasurer, Frank S. Baxter; executive committee, G. G. Reinle, C. T. Devine, H. B. Mehrmann, H. W. Harding, E. H. Barbera, and N. A. Cary. Case reports were given by E. H. Barbera, W. B. Palamountain, C. A. Wills, and J. R. Fearn. This being

the annual meeting no regular scientific program was presented.

CONTRA COSTA COUNTY

Contra Costa County Medical Society (reported by L. St. John Hely, secretary)—The regular monthly meeting was held at the residence of C. R. Leech at Walnut Creek, Hall Vestal presiding. The minutes of the previous meeting were read and approved, notifying the society of the election of the officers for the present year.

Discussions were held in regard to insurance. Letters were read from the Fort Wayne and other insurance companies, the consensus of opinion being that the "Group Insurance" was in the nature of an experiment, and as insurance is a matter of life and death, we had better stay with the ship that carries us safely over.

Cases of stomach trouble in children were discussed by the members, discussion being opened by McKenzie.

Members present were: C. R. Leech, Hall Vestal, George McKenzie, F. L. Horne, E. C. Love, J. Edward Clark.

J. Emmet Clark and William A. Rowell were elected to membership.

FRESNO COUNTY

Fresno County Medical Society (reported by T. Floyd Bell, secretary)—At the meeting held January 8, at the General Hospital of Fresno County, forty members were present.

Grant Selfridge of San Francisco gave a paper on "Cosmetic Surgery," which was illustrated by lantern slides.

H. E. Alderson, also of San Francisco, read a paper on "Occupational Dermatoses."

The following officers were elected for the ensuing year, and were duly installed: President, John D. Morgan; first vice-president, Paul S. Barrett; second vice-president, J. A. Montgomery; secretary, T. Floyd Bell; assistant secretary, Charles A. James; treasurer, United Bank and Trust Co.; board of governors, Frank Tillman; delegates, Guy Manson, J. R. Walker; alternates, Thomas F. Madden, L. R. Willson; board of censors, C. P. H. Kjaerbye, B. B. Lamkin, W. F. Stein; committee on ethics, J. L. Maupin, J. H. Pettis, A. B. McConnell; committee on program, A. H. Konigmacher, D. I. Aller, E. A. Larson.

The February meeting of the Fresno County Medical Society was held February 5 at the nurses' home of the General Hospital of Fresno County, with the following members present: Cross, Couey, Miller, Ingram, Stein, Wilson, Kjaerbye, Dixon, Jamgotchian, J. R. Walker, Wiese, Vanderburg, G. W. Walker, Sheldon, Montgomery, Lamkin, Webster, Weddle, C. A. Robinson, Ransom, Pettis, Scarboro, Ellsworth, Wheeler, Schottstaedt, Milholland, Broemser, Craycroft, Tillman, Bell, Morgan, Newton, C. D. Collins, Jorgensen, Wahrhaftig, Anderson, Aller, and Robbins.

Visitors present were H. O. Collins, director of the hospital; L. Seligman of Dinuba, and G. C. Nedry, recent arrival in Fresno.

The usual routine business was transacted.

A. B. Spalding, Professor of Obstetrics and Gynecology at the Stanford Medical School, presented a very interesting and instructive lecture on "Problems in the Repair of the Pelvic Floor." His lecture was illustrated throughout by lantern slides. He spoke of the anatomy of the pelvis, especially the muscles and fascia, and showed how damage was done to these structures and means of preventing such damage. He also dwelt upon the operative repair, especially emphasizing the use of the pelvic fascia.

S. M. Long was unanimously elected a member of the society.

General Hospital of Fresno County—A. C. Spalding was the guest of the staff of the hospital at luncheon February 5, and gave a very interesting and practical talk on "Eclampsia," dealing with various phases of the subject, but especially the treatment and particularly the non-surgical treatment.

On Tuesday evening, February 12, the staff of the hospital will hold its annual dinner and meeting at the California Hotel.

GLENN COUNTY

Glenn County Medical Society (reported by C. L. Terrill, secretary—The Glenn County Medical Society met at the Willows Sanitorium January 22, and elected the following officers for 1924: J. D. Edmundson of Orland, president; C. L. Terrill, secretary.

KERN COUNTY

Kern County Medical Society (reported by William H. Moore, secretary)—The regular meeting of the society was held at the Petroleum Club, Taft, January 15. The West Side branch of the society were hosts, and had prepared an entertaining program.

M. W. Pascoe was toastmaster at a very excellent dinner. The principal speaker of the evening was Granville MacGowan of Los Angeles, who spoke on "Skin Diseases," emphasizing careful observation for diagnosis and treatment. Charles L. Hawkins of Taft presented a clinic in kidney disturbances. He showed numerous interesting pyelograms. William Duffield of Los Angeles was a guest and proved an eloquent speaker.

Members present: H. W. Hawkins, Charles Hawkins, D. E. Edgerton, Homer Rogers, M. W. Pascoe, P. T. Page, T. M. McNamara, C. S. Compton, L. W. Ellis, O. W. Young, Joe K. Smith, Keith S. McKee, A. R. Moodie, F. A. Hamlin, F. J. Gundry, C. W. Kellogg, P. J. Cuneo, C. A. Morris, F. G. Linde, W H. Moore, E. A. Shafer.

LOS ANGELES COUNTY

Hollywood Hospital Stock Changed to Non-Dividend Basis—All friends of good hospital service will read with pleasure that the Hollywood Hospital Corporation has changed their organization to a non-dividend-paying basis. It will be remembered that the Hospital Betterment Service urged an organization of this class when the proposition first began to take shape.

Hollywood needs a good hospital, and some of the physicians and other good citizens deserve commendation for their persistence in making progress, in spite of many difficulties.

MERCED COUNTY

Merced County Medical Society (reported by Brett Davis, secretary)—The January meeting of the Merced County Medical Society was held January 17 at the office of the secretary. Members present: W. C. Catton, Brett Davis, J. L. Mudd, E. R. Fountain, J. L. McDaniel, and A. S. Parker. Visitors: F. W. Yocom of Livingston, C. F. Harrar, a newcomer in Merced; J. D. Dameron of Stockton, and J. C. Robertson of Modesto.

The society officers of 1923 were re-elected to serve during 1924, and F. W. Yocom, who joined the society, expecting to get a dimit from San Francisco County Medical Society, was elected delegate to the State society with J. L. Mudd as alternate. Claude Henry Church of Yosemite was also elected a member of the society, subject to approval by the State society officials.

Dameron then read a paper on "Private Hospital Management." Robertson talked on the same subject, and a general discussion by all present followed.

An epidemic of measles has been prevalent in and near Merced.

B. H. Bush is now a patient in the Burnett Sanitarium, Fresno, with laryngeal diphtheria.

MARIN COUNTY

Marin County Medical Society (reported by J. H. Kuser, secretary)—Clark, Dufficy, De Lancey, Hund,

Howitt, W. F. Jones, Kuser, Landrock, Larson, Mays, Newman, and Stanley were present at the January meeting, which was called to order by the newly elected president, R. G. Dufficy. The other officers are: Vice-president, Landrock; secretary and treasurer, J. H. Kuser; trustees, Larson, De Lancey, and Mays.

Mr. Gallagher of the Aetna Insurance Co. addressed the meeting on group insurance. The committee on the hospital reported the necessity for a new modern hospital of at least sixty beds. A committee was appointed to interest the residents of the county in financing the project.

Hospital Resolution

"Whereas, The city of San Rafael and county of Marin has hospital facilities inadequate and unsatisfactory for present and future needs, and

"Whereas, There is a definite requirement for better hospital care available to the citizens of the community, and

"Whereas, The establishment of a suitable hospital would be a valuable asset to the city and surrounding country, and

"Whereas, Such a proposed hospital would not only aid in the growth of the city, but would tend to conserve the health of the citizens, be it, therefore,

"Resolved, That the Marin County Medical Society sponsor such a proposed adequate hospital, and is ready and willing to help in any way; be it further

"Resolved, That a hospital building committee be appointed by the president of the Marin County Medical Society, with the sanction of its members, to devise ways and means to promote such a hospital; and it is further

"Recommended to have a committee of twelve citizens who have the general interest at heart to talk up this proposition and also submit a number of names of citizens to confer with said committee."

A motion was passed requesting our representatives in Congress to use their efforts to reduce the narcotic tax. The war being over, it was considered a rank injustice to tax the medical man in order to enable him to relieve pain.

MODOC COUNTY

Babies All Right Now—Under this heading, the Cedarville Record says editorially:

"Well, the babies of Surprise Valley and Modoc County ain't agoin' to have any more sickness now, because Dr. ——— was around last week and told the babies all about how to tell their mothers when they didn't feel well. Miss ———, supervisor of nurses, also came along, probably to nurse the doctor. Miss ——— was also in the party to tell the kiddies when they had the toothache. We don't know why Mrs. ——— came along, unless it afforded her an excuse to draw her salary. Their visit here was highly gratifying to the taxpayers, as it makes a big dent in the tax budget. The taxpayers are, of course, tickled plumb to death to have the ladies visit the county, as it resulted in so much good being done—especially in providing them with a pleasant junketing trip."

The editor is wrong in thinking that local and State taxpayers pay all this bill. Under the Sheppard-Towner law our beneficent Washington government pays half back to the State. Of that Washington money, some was also collected locally.

President Coolidge has announced his unequivocal opposition to Federal subsidies to State governments, and so we don't have any expansion of this particular fad for at least two more years.

PLACER COUNTY

Placer County Medical Society (reported by Robert A. Peers, secretary)—The society held its regular meeting at the Placer County Hospital in Auburn on the evening of February 9, President Miner presiding. The following members were present: H. N. Miner, C. J. Durand, R. J. Nicholls, G. H. Fay, H. N. Kanner, R. A. Peers, J. A. Russell, J. G. Mackay, F. L. Fanning, L. B. Barnes, F. E. McCullough

Visitors: Richard W. Harvey, Ernest H. Falconer, Cyril E. Lewis.

Fred Harrison of Georgetown and Cyril E. Lewis of Auburn were elected members of the society.

Dr. Mackay, chairman of the Committee on Fee Schedule, made his report. The final decision on the report was withheld until the matter could be further discussed at the next meeting.

The literary program of the evening consisted of two very interesting addresses, which were quite generally discussed. Richard W. Harvey of San Francisco gave an address on the "Personality of the Patient." Ernest H. Falconer, also of San Francisco, discussed the significance of blood pressure.

SACRAMENTO COUNTY

Sacramento Society for Medical Improvement (reported by G. J. Hall, secretary)—At the January meeting of the society, G. N. Drysdale, the newly elected president, presided. Wallace R. Briggs read a paper on "The Pathology of the Eye in Relation to General Pathology." Interest in the subject was enhanced by the use of original lantern slides and beautifully prepared sections of the eye, showing pathological conditions.

The society is having its programs presented by the local members, and finds this a very excellent plan. It has been definitely proved that with the clinical material available the Sacramento physicians are writing and presenting papers and discussions on a par with those that were presented by other plans. During the last few years there has been frequent discussion, in an effort to determine the advisability of inviting speakers from other centers or urging local men to present their ideas in discussions. After having tried both plans for several years, the directors have definitely established the policy of having all papers presented by local physicians, with the exception of the paper at the annual banquet. And also, of course, we will gladly urge the acceptance of an invitation to speak here by any physician from any place who has some special work to report that would be of general interest. The society feels that Sacramento is very rapidly being recognized as a medical center, and that this recognition is justly deserved.

In reference to the post-graduate clinic plan proposed by the State Association, the Sacramento Society does not feel any need for such work here, and as a consequence has voted to answer the question in the main negatively. The reason for this action is in accord with the plan referred to above, and not an expression of sentiment against a plan that obviously will probably be very valuable to smaller societies.

Our annual meeting and banquet will again be held, as always before, on March 17, that being the date of the first meeting of this the oldest medical society now existing in the State.

SAN BERNARDINO COUNTY

San Bernardino Medical Society (reported by E. J. Eytinge, secretary)—The society met February 5 at San Bernardino County Hospital, with fifteen members present, sixty-six absent, and thirty-five guests.

Nelson W. Janney of Los Angeles presented what, he said, has proved to be rather a practical adaptation of the insulin treatment of diabetes. The talk was illustrated by lantern slides, as the society now has a Spencer delinearscope, and is prepared to show slides, cards, photographs, and small objects at its meetings.

Phillip J. Tunnell of Loma Linda was elected to membership.

SAN DIEGO COUNTY

San Diego County Notes (reported by Robert Pollock)—The new La Jolla hospital, a modern fireproof structure of fifty beds, is rapidly assuming an outline on the Prospect avenue skyline. Situated in this delightful suburb with its outlook on the Pacific, this hospital will furnish a most attractive place

for the treatment of nervous and chronic, as well as post-operative cases. However, it will be adequately equipped in every way, containing a modern operating room, X-ray and clinical laboratories, diet kitchen, sun parlors, and the best of nursing service. Attached to it by covered corridors will be a well-planned metabolic clinic and hospital of fifteen beds, bringing the total capacity of the two buildings to about sixty-five beds. The metabolic department will have its own director—applications for which position are now in order—who will be allowed opportunity for and will be encouraged to do research work along metabolic lines. No movement better calculated to arrest the attention of those who watch closely the development of the times has been started in Southern California in recent years.

The County Medical Society went to Camp Kearney Hospital Tuesday, February 12, to participate in an intensive study of the problems involved in the treatment of tuberculosis. Papers were presented by members of the medical staff of the hospital as follows:

"Tuberculin Therapy." D. O. N. Lindberg.
"Helio Therapy." Bryant R. Simpson.
"Artificial Pneumothorax." W. A. Cashion.
"Tuberculosis of Larynx." John H. Mallery.

After general discussion of these papers, a luncheon and smoker was enjoyed through the hospitality of the medical commandant and his staff.

G. R. Stevenson, M. D., has recently been appointed by the county supervisors to the office made vacant by the death of O. G. Wicherski. This appointment of county physician and medical director of the San Diego County General Hospital meets with the approval of the County Medical Society and the community at large. A splendid field is here offered for the expression of those professional, executive, and social qualities of which Stevenson has shown himself to be possessed.

Sheppard-Towner Clinic for Escondido — The Sheppard-Towner law enforcement machinery is starting a baby clinic in Escondido, according to press dispatches. Mrs. Rose Crise is chairman of the standing committee that will conduct the clinic.

SAN FRANCISCO COUNTY

Eye, Ear, Nose, and Throat Section of the San Francisco County Medical Society (F. C. Cordes, secretary)—At the meeting of January 22, Kaspar Pischel gave an extract of Karl Hamburger's paper, "Experimental Glaucoma Therapy." Hamburger injected synthetic suprarenin sub-conjunctivally near the cornea as much as ½ cc. A few minutes afterward the pupil dilates to extreme mydriasis; synechiae which withstood action of atropin are sometimes torn.

This observation induced Pischel to add to the atropin cocain sub-conjunctival injections in cases of stubborn iritis an equal amount of adrenalin, with good results. The intraocular tension is reduced by adrenalin injections considerably from 20 to 50 mm., and even the other not injected eye often becomes softer. The healthy eye sometimes becomes soft (10 to even 6 mm.). In the chronic glaucomatous eyes, pressure went down 20 to 50 mm.; even the other not injected eye often becomes softer. Several cases in which eserin had had no effect, after the suprarenin injections, reacted promptly on eserin. Hamburger's explanation is: "Glaucoma is caused by atony of the blood vessels, on account of the atony of the sympathetic nerve. Therefore, he says, the uveal corpus cavernosum is filled with blood and increases the pressure in the interior of the eye. The essentials of the therapy of glaucoma consist in stimulating the sympathetic nerve and thus stimulate the vascular tonus."

Doctor Pischel tried adrenalin injections in a few cases; the dilatation of the pupils was quite striking; the lowering of the pressure was not uniform. He asked the members to try it and report their experiences.

Charles Edward Locke Jr. presented a paper on "Three Cases Pulsating Exophthalmos or Intracranial Arterio-Venous Communication"—Three cases which had had unilateral pulsating exophthalmos were presented. One of these patients had been treated only by simple digital compression of the carotid, the second by digital compression and ligation of the internal carotid artery, and the third by digital compression and by both ligation of the internal carotid artery and the orbital veins. The first patient responded quickly to compression of the carotid and now, three years later, shows nothing except slight enlargement of scleral and episcleral vessels and atrophy of the disc on the affected side. The second case did not improve under digital compression of carotid, but did show marked improvement after Locke ligated the internal carotid. The exophthalmos decreased, the bruit ceased, and the extra ocular muscles palsies became much less marked. The third patient's became worse during the preliminary course of digital compression, but ligation of the internal carotid decreased the exophthalmos, and relieved entirely the diplopia and strabismus. Later, however, a marked pulsating swelling appeared above the inner angle of the eye. Locke and Cordes performed a ligation of the superior ophthalmic vein and its branches. This did away with the pulsating swelling; but some months later the veins of the temporal region became engorged and tortuous. There still remains a certain degree of exophthalmos. In reviewing the literature, Locke concluded that digital compression of the carotid should be used always as the initial therapeutic procedure. If unsuccessful, internal carotid ligation should then be used. Since de Schweinitz and Holloway's analysis of the 313 cases in the literature up to 1907, Locke was able to collect 285 additional cases, making a total of 598. The pathology of the condition is usually arterio-venous communication between the internal carotid artery and cavernous sinus. Less often simple aneurism of either the internal carotid or ophthalmic artery, or tumor of the orbit is the cause.

Discussion—Otto Barkan—The visual field defect in one of Locke's cases shows that the line of fracture must have involved the bony optic canal. In the optic canal, the periosteum constitutes the sheath of the optic nerve. The septa of the optic nerve are formed by extensions from the periosteum: thus the fracture of the bone and consequent laceration of its periosteum in this situation frequently involves a laceration of the substance of the optic nerve with hemorrhage and edema and consequent segment defect in the visual field as is seen in this case.

E. B. Towne presented a paper on "The Value of Positive Signs in the Localization of Brain Tumors." The improved results in the field of neurological surgery, though partly due to the technical proficiency of the operator who is accustomed to this work, are to be largely attributed to the fact that every effort is now made to diagnose and localize tumors in an early stage. With the lesion accurately localized, extirpation of Roentgen ray therapy, depending on the situation and on the pathological character of the tumor, may be undertaken. Nothing can displace the usual methods of diagnosis—careful history, neurological examination, eye and ear examinations, and Roentgen rays of the skull—as a basis of diagnosis. But a considerable proportion of tumors cannot be accurately placed without further evidence, and we have other methods which are of value. These factors may be taken up under four headings, with illustrative case reports and lantern slides. In each case the practical diagnostic value of the various findings will be discussed, with special reference to the facts contributed by examination of the eyes, nose, and ear. (1) Roentgen-ray demonstration of calcification in brain tumors is a positive and conclusive finding. Newell found that 40 per cent of the verified brain tumors examined by the department of roentgenology at Stanford University Hospital during 1922 were visualized and accurately localized by the skull films. One patient, who had a calcified glioma of the

frontal lobe, gave entirely negative findings otherwise. (2) Proliferation of the skull over meningeal tumors (dural endotheliomas) is a positive and conclusive finding, which is of especial importance when these tumors, as frequently happens, compress a frontal lobe. (3) Changes in the percussion note of the skull (McEwen's sign), is a corroborative finding which requires confirmation by other localizing signs. (4) Cerebral pneumograms (Dandy) mark the greatest advance of recent years. Deformity of the air-filled ventricles gives positive localization of the lesion. The danger has probably been overestimated; there have been no bad results in the Stanford Clinic. Cases were reported in which the pneumograms showed the situation of the tumor. This is to be considered the final and certain method, to be used when all other means fail.

Discussions — Howard Naffziger — I agree with Towne, in regard to the superiority of quantitative perimetry with 1 mm. discs as compared to other methods. I would like to ask a question of the ophthalmologists present in regard to two cases of probable cerebrallar tumor with choked discs of six diopters I have recently seen. Decompression was done in each, resulting in reduction of the swelling of the discs and appearance of slight atrophy. After one and a half years, intracranial pressure was again much increased, but with very little associated edema or choking of the discs. I wonder has this been observed before and might it be explained by blocking of the lymph channels as result of the first choking? I have received a great deal of benefit from otological examination in two cases that I recall. Ventriculograms are of great aid. We have had no fatalities from the method as yet, and only one or two moderately severe reactions. In regard to calcifications, and with due regard to the improved X-ray technique and the excellent work of Chamberlain and Newell, I do not feel that 40 per cent could show calcification. Many calcifications, possibly the result of old infective processes, cannot be interpreted as meaning brain tumor.

Doctor Newell—I would like to lay stress upon the importance of ocular findings. Although some are not localizing, just as in X-ray scalloping of the skull or erosion of the sella may not be localizing, other eye-signs are distinctly localizing and have their counterparts in X-ray findings such as destruction of the floor of the sella or calcifications. I agree with Naffziger that the series of 40 per cent calcifications is extraordinary and cannot be expected to be repeated; there happens to be a large proportion of calcified gliomata in this series. X-ray localization of the tumor is disappointing on the whole. Yet one or two cases with absolutely no other findings except convulsions in which X-ray showed tumor due to the accident that it was calcified make one feel the importance of X-ray study of the suspected tumor.

Walter Schaller — A choked disc is an indirect symptom most frequent in brain tumor, and this makes the responsibility of the eyeman a very great one. I have seen a number of examples of choked discs going on to blindness without having had the benefit of these modern methods of diagnosis. I have seen such cases ascribed to sinus disease. Any case which is not frankly due to a sinus should have the benefit of these tests. I should like to ask of the ophthalmologists whether it is possible to differentiate between a toxic optic neuritis and a papilloedema due to brain tumor by mere inspection. Without the benefit of careful perimetric examination and neurological examination, I believe one cannot differentiate between the two.

Kaspar Pischel—I would not venture to make a differential diagnosis from the ophthalmoscopic appearance alone. I recall from my own experiences cases of pronounced papillitis caused by albuminuria, while I have fresh in my mind a case of brain tumor who showed when first seen by me only a haziness of the outlines of the disc.

Southern Pacific Hospital — The monthly staff meeting of the Southern Pacific General Hospital was held on Wednesday, February 6, at 8:30 p. m.

Program—"My Lady Gout," J. Wilson Shiels; Informal Talks by D. A. Beattie (San Jose), M. W. Brown and W. O. Smith (Alameda) and A. H. McFarlane (Mountain View), Company district surgeons; Report of a Case of Myelogenous Leukemia, Philip King Brown; Report of Two Cases of Lymphogenous Leukemia, W. T. Cummins; Roentgen Demonstration, L. B. Crow.

St. Joseph's Hospital Staff Meetings—St. Joseph's Hospital staff, San Francisco, on February 13 concluded "Modern Treatment of Syphilis" by having physicians point out particulars of the subject in their respective lines.

Ludwig A. Emge stated that proper treatment prevents many of the remote effects of syphilis, including ectopic pregnancy. The new conception of heredity permits the mother to nurse her baby. Wassermann reaction in the new-born is unreliable until after twenty days. Placental diagnosis, though difficult, is better. X-ray of foetus is useful where autopsy is refused. Neosalvarsan and mercurial rubs, with appropriate rests, are best in pregnant mothers and result in the birth of three-fourths of the babies, as against one-fourth where no treatment had been given.

M. L. Cohn considers mercury and arsenic most important when treating hereditary syphilis. Infants under one year should be given inunctions and mercurial injections. After the first year, calomel and chalk powder, according to weight, 1 per cent bichloride injections with massage of site, are used. Eight weekly mercurial injections, followed by eight weekly arsphenamine injections, are used. Injection into the longitudinal sinus is resorted to in infants under one year, if necessary. Intramuscular injections of arsphenamine are not advised. Iodides and the bismuth preparations are not used.

J. M. Wolfsohn spoke on neurosyphilitic therapy, which may be necessary even nine months after the primary lesion. There may be arterial, meningitic or parenchymatous lesions, only the first existing alone, although all occur in combination. Tabes is most common and is treated systemically, like any other lesion. Inunctions with oleate of mercury or blue ointment, thirty-six rubs of a dram each, followed by benzin washing, is used. After the first week, start with neoarsphenamine. Watch the kidneys. If patient cannot stand Hg or As, try the bismuth preparations. Hectine "A," "B" and "C" hectargyre can also be used and will cure, especially early cases. The Burn's method of injecting mercurialized serum intraspinally is used only where there are lancinating pains. Dercum's spinal drainage and intravenous salvarsan is best in other cases. Regenerative educational movements are useful. Give three courses of treatment a year and treat three years. In general paralysis of the insane, start with only .10 of neosalvarsan; in five days .15 and repeat and increase gradually. Salicylate of Hg and calomel injections cause pain. K I is useful in arterial lesions (thrombosis and embolism)—not in parenchymatous or tabetic cases. In G. P. I. use in small amounts, gtts. XX t. i. d. Be careful of the teeth in all cases.

Election of officers for 1924 resulted in the re-election of A. S. Musante as head of staff; Frank Lowe as vice-president; Louis Overstreet as secretary; R. F. Grant as financial secretary; F. C. Keck as treasurer, and William Quinn, W. T. Cummins, L. B. Crow, P. Collischonn, C. E. French, T. J. Janes, J. M. Stowell, and D. E. Stafford as executive board.

The program for March 12 will consist in "Medical Improvements Noted in the Old World," by Alex Keenan, and "X-ray as an Aid to Early Diagnosis," by F. H. Rodenbaugh.

The Franklin Hospital Staff met on February 4, 1924, Otto Westerfeld presiding.

The officers elected for the ensuing year are as follows: Chairman, J. Wilson Shiels; vice-chairman, W. H. Heinzman; secretary, Ewald H. Angerman.

J. Wilson Shiels read an interesting paper on "Gout," and Harry E. Alderson gave a talk on "Oc-

cupational Skin Diseases" to an appreciative audience.

The popularity of the morning clinics prompted a number of those present to pledge their aid in furthering this work by showing their unusual or timely cases.

S. J. Hunkin conducted the morning clinic on February 4, 1924, and presented several instructive orthopedic cases.

SANTA BARBARA COUNTY

Santa Barbara County Medical Society (reported by Alex C. Soper Jr.,secretary)—Meeting called to order Monday, February 11, at the Cottage Hospital, President Robinson in the chair. Present: Twenty-one members, four internes, and the following guests: Mr. Curtis, superintendent of the hospital; Dr. Blatherwick of the metabolism wing; Dr. Allen, president of the dental society.

Irving Wills and W. H. Eaton were unanimously elected to membership.

Moved, seconded, and passed with one dissenting vote that the dues of the society for 1924 be $12.

Correspondence from the U. S. Veterans' Bureau in re the proper reports on cases of ex-service men ill reportable diseases, and from Mr. J. C. Thorpe, in re mechanical therapy, read.

Hill Hastings, M. D., of Los Angeles gave a very interesting talk on "The Tonsils as a Source of Joint Infection, with Subsequent Reports from One Hundred Patients." Discussion was lengthy and thorough, and participated in by Allen Williams, Nuzum, Profant, Means, Mellinger, Allen, Stevens, and Brush.

SANTA CLARA COUNTY

Medical Luncheon Club (reported by George L. B. Barry)—The Santa Clara County Medical Luncheon Club recently held its semi-annual election of officers. Alson A. Shufelt was elected president; P. A. Jordan, vice-president; and George Long Barry, secretary-treasurer.

The club includes in its membership only those doctors who are members of the County Medical Society. Meetings are held every Friday at noon, at which time a program consisting of a speaker from out of town or from within the club is heard. Many local, as well as general, subjects of medical interest are reviewed. It has been the pleasure of the club recently to hear from several of its members who have been abroad or East; also from two local attorneys at law—attorney Ernest E. Williams, on a medico-legal subject, and attorney Edwin A. Wilcox, on his recent visit through Spain.

J. I. Beattie and Doxey Wilson recently returned from an Eastern trip, and each discussed the work being accomplished at Chicago and Rochester medical centers.

Jay C. Elder, George Hall, L. M. Rose, and Donald Davy have recently returned from European medical centers and spoke about their personal experiences, each having gone to a different clinic.

H. C. Brown, city health officer, reviewed the milk situation and said that San Jose's milk supply was scoring high and ranking first as to quality among the cities in California.

At a round-table discussion of interesting patients, John Hunt Shephard elucidated the technique of the operation for the removal of thyro-glossal duct cyst. Bert E. Lochr reported a case of malignancy of the uterus treated with X-ray, but followed by multiple metastatic nodules of the skin. D. E. Tiffany discussed a case of frontal sinusitis with medical treatment. An unusual instance of multiple subperiosteal abscesses was reported by Fred S. Ryan. Cultures made by F. Proescher in the San Jose Hospital laboratory have repeatedly shown a pure growth of trichomycete.

Los Gatos has Diphtheria Clinic—The Board of Trustees of Los Gatos grammar school offers to the pupils free treatment in the prevention of diphtheria. Parents of the school children have been circularized and asked to give their consent to have the toxin-antitoxin immunization given.

California Medical Association

Abstract of the Minutes of the 142nd Meeting of the Council of the California Medical Association—Held in Los Angeles Biltmore, Los Angeles, Calif., January 26, 1924. Present: Edwards, MacGowan, Parkinson, Carrington, Kiger, Stover, De Lappe, Beattie, Bine, Kress, McArthur, Curtiss, Emma W. Pope, and General Counsel Peart. Absent: Striet-mann, Coffey, Ewer, McLeod, Hamlin, and Saxton Pope.

Seal: Whereas, The name of this society was changed on the adoption of the amended constitution by the House of Delegates at the annual meeting held at San Francisco, June, 1923, from "Medical Society of the State of California" to "California Medical Association"; and

Whereas, The seal of the society is now inscribed as follows: "The Medical Society of the State of California, 1856 and 1902"; now, therefore, be it

Resolved, That the inscription on the seal of this association be amended and changed to read "California Medical Association, 1856 and 1902."

Appointment of Indemnity Defense Fund Trustee—William Ellery Briggs of Sacramento, whose term as trustee of the Indemnity Defense Fund expired January 1, 1924, was elected to succeed himself for the ensuing three years.

Bank Accounts of Indemnity Defense Fund—The following resolution was unanimously passed:

Whereas, The name of the society was changed by amendment of its constitution at the annual meeting of the House of Delegates held at San Francisco, June, 1923, from "Medical Society of the State of California" to "California Medical Association"; and whereas, certain moneys of the Indemnity Defense Fund are on deposit in various banks, and the Board of Trustees thereof is named in said accounts and otherwise as "The Board of Trustees of the Indemnity Defense Fund of the Medical Society of the State of California"; now, therefore, be it

Resolved, That the title of the said board and of the said bank accounts, wherever same appear, be changed to read and appear as "The Board of Trustees of the Indemnity Defense Fund of the California Medical Association."

Model Constitution and By-Laws for County Medical Societies—The general counsel submitted the Constitution and By-Laws of the San Francisco County Medical Society, stating that this constitution was prepared to meet the particular needs of that county society, but that he believed it might serve as a model form for other county societies.

After discussion, it was the sense of the council that a copy of the Constitution and By-Laws of the San Francisco County Medical Society be furnished each member of the council for his consideration; and that the question be placed on the docket for the next council meeting as to the desirability of approving such constitution and offering it to county societies as a model form.

Professional License Tax—Resolved, That a committee of three be appointed by the Chair to take up the matter of professional license tax in conjunction with the committee of the American Society of Civil Engineers or any other agencies.

Bulpit vs. Fullerton Ordinances—The secretary read correspondence just received from the secretary of the Orange County Medical Society regarding the charges preferred against J. Muncey Bulpit of Santa Ana for practicing in the town of Fullerton without a license, although licensed to practice in the State of California and answering an emergency call at the time of his arrest. The question of municipal license tax was then discussed by all present.

Action by the Council—Resolved, That the gen-

eral counsel be empowered to take up, investigate and defend, if necessary, the case of Dr. Bulpit vs. the town of Fullerton.

Physicians' Income Tax—Wire sent by the chairman of the council to the A. M. A. regarding income tax and reply thereto were read, and the present ruling whereby convention expenses are not deductible from physicians' income taxes, together with the possibility of securing a reversal of such ruling was thoroughly discussed.

Action by the Council—Resolved, That letter be written to all senators and representatives in California regarding the re-establishment of the ruling exempting physicians' traveling expenses to medical conventions from their income tax; and that it is the sense of the council that such expenses are deductible by members of the association.

Tax on Earned Incomes—The general counsel discussed the present tax on earned incomes, and recommended that the A. M. A. be requested to circularize all State societies regarding a tax reduction on earned incomes as against unearned incomes.

Action by the Council—Resolved, That the A. M. A. be requested to take up the question of a tax reduction on earned incomes as against unearned incomes with all State units and all other professional groups, with a view to making this national action; and that all California physicians be requested to get in touch with all California senators and representatives.

Gorgas Memorial—The secretary read a letter from Franklin Martin, chairman of the board of directors of the Gorgas Memorial, requesting the secretary to accept membership on the State governing committee and subscribe $100 to the Endowment Fund as such a member; this money to be used for advertising purposes only.

Action by the Council—Resolved, That the communication be received and placed on file; that the editor be instructed to furnish the necessary publicity in the form of an editorial in the Journal; and that the whole question be laid on the table.

Question of Dividing United States into Territorial Districts—The secretary read the report of the Committee on the Division of the United States into Territorial Districts and also extracts from the minutes of the House of Delegates of A. M. A. as adopted in June, 1923, which states that this plan is neither desirable nor feasible.

Action by the Council—It was the sense of the council that no action be taken at this time; and that the committee be discharged, with thanks.

Woman's Auxiliary—The secretary read a letter from ex-President Brainerd embodying the report of his personal representatives to the annual meeting of the Woman's Auxiliary of the A. M. A.

Action by the Council—The communication was received and placed on file.

Bunnell Memorial—The secretary read a report from the committee on the Bunnell Memorial. It was the sense of the council that the report be received and placed on file, and the committee be requested to furnish further data to the council.

Keene Committee—Report of the committee appointed to investigate the condition of the grave of the first president of the Society, J. B. Keene, was read and considered.

Action by the Council—Resolved, That the committee's report be accepted with the understanding that the work shall be properly done for a sum not to exceed $175; and that the matter of inscription be referred to the chairman with power to act; and that the committee report back to the council.

Drug Addiction—The secretary presented a request from the Bureau of Drug Addiction for the co-operation of the California Medical Association, together with a report from the League for the Conservation of Public Health on the same subject, which was fully considered by the council.

Action by the Council—Resolved, That the council having heard the report from the League for the Conservation of Public Health, the communication from the Bureau of Drug Addiction be received and placed on file.

Audits for 1923—The secretary read audits of the accounts of the association and the fund as prepared by Lester Herrick and Herrick, public accountants, for the year 1923.

Action by the Council—Resolved, That the reports of the auditors, Lester Herrick and Herrick be received and placed on file.

Recommendation of Physicians—Question of policy, with reference to the compilation of an alphabetical list of all members of the association by specialties, was considered and thoroughly discussed, inasmuch as many requests are received by the State office for such information.

Action by the Council—Resolved, That, when an inquiry comes into the State office for a physician or surgeon in any particular specialty, the secretary refer those requesting such information to the proper officials of the county society where the services are to be rendered; and that the county society be notified of such inquiry. Dr. Bine voted "No," and desired his vote so recorded.

Tentative Program for 1924 Meeting—The secretary presented a tentative program for the 1924 meeting commencing with a council meeting on Sunday evening, May 11, and continuing through Thursday, May 15.

Action by the Council—Resolved, That the program, as presented by the Committee on Scientific Program, be adopted.

Graduate Work for Physicians in General Practice—Progress report from the committee on graduate instruction for physicians in general practice was read and considered.

Action by the Council—Resolved, That the partial report of the committee on graduate instruction for physicians in general practice be received; and that the chairman of the committee be instructed that, if any county society desires to hold a meeting along the lines of their report, they be allowed to do so; and that the committee report back to the council.

Optional Medical Defense—The general counsel presented a revised form of announcement of "Optional Medical Defense," as requested by the council.

Action by the Council—Resolved, That the form and contents of the anouncement of Optional Medical Defense as this day submitted to the council by the legal department be and the same is hereby approved; and that a copy of such announcement be mailed to each member of the association; and that such other notice thereof be given as the executive committee may determine.

Commercial Exhibits—The question of commercial exhibits for the 1924 meeting was brought up and discussed, in view of a request for definite instructions from William Duffield, chairman of the committee on commercial exhibits.

Action by the Council—Resolved, That William Duffield be instructed that commercial exhibits at the 1924 State meeting shall comprise only such articles as are approved by the Council on Pharmacy and Chemistry of the A. M. A., or that are of strictly ethical character.

Change in Name of Journal—Resolved, That the editor be requested to change the title of the association's Journal at such time as he thinks appropriate to conform with the present name of the association.

Illness of ex-President Brainerd—Dr. McArthur advised the council of the serious illness of ex-President H. G. Brainerd.

Action by the Council—On motion of McArthur, seconded by Kiger, the council, having heard with regret of the serious illness of former President H. G. Brainerd, extends its sympathy and hope for his speedy recovery.

Publicity for the 1924 State Meeting—The question of publicity for the 1924 State meeting was considered.

Action by the Council—On motion of Kress, seconded by De Lappe, it was the sense of the council that Mr. Celestine J. Sullivan of San Francisco, ex-

ecutive secretary of the League for the Conservation of Public Health, be requested to take charge of publicity matters in connection with the annual meeting of the association.

Industrial Medicine—All members of the council discussed the various problems and points brought out at the open meeting held in the evening, to which meeting all members interested in industrial medicine and surgery were invited.

Action by the Council—Resolved, That the various matters under discussion at the open meeting, together with those matters included in correspondence before the council, be embodied in the form of specific queries and submitted to every member of the Industrial Medicine and Surgery Section of the State Association, with a request for recommendation and suggestions; and further that this questionnaire be submitted to the executive committee for approval before transmittal of said section.

Utah State Medical Association

J. R. MORRELL, M. D., Ogden - - President
WILLIAM L. RICH, M. D., Salt Lake - Secretary
W. R. CALDERWOOD, M. D., Associate Editor for Utah

Salt Lake County Medical Society (reported by M. M. Critchlow, secretary)—A regular meeting of the Salt Lake County Medical Society was held at the Commercial Club, Salt Lake City, Monday evening, January 28, 1924, with sixty-seven members and seven visitors present; President A. A. Kerr presiding.

Minutes of the previous meeting were read and accepted without correction.

F. F. Hatch presented a very interesting case from whom he had removed a hypernephroma, and pathological specimen was demonstrated.

L. N. Ossman presented a case of arthritis of the spine, with abdominal symptoms showing improvement after application of the body-cast. He also presented interesting X-ray films of the spine.

A. J. Hosmer presented a case of fracture of the eleventh and twelfth dorsal vertebrae on which he had done a Hibbs operation.

The program for the evening was a symposium on backs. J. F. Critchlow presented the subject of "Railway Spine," illustrating very clearly how the condition was brought about by many examinations in a patient susceptible to suggestion.

A. J. Hosmer presented the subject of "Fractures and Dislocations," discussing symptoms and methods of relief by fixation. To illustrate his points, there were X-ray films shown by J. P. Kerby.

S. C. Baldwin presented the subject of "Arthritis of the Spine," stressing physical examinations, X-rays, and history. He dwelled especially on infectious and traumatic arthritis and treatment by immobilization. These papers were discussed by Tyree, Ossman, Holbrook, Morrell of Ogden, Ezra Rich of Ogden, and J. P. Kerby, who exhibited some films showing anomalies.

The proposed amendment to the By-laws, providing for a permanent medico legal committee, was read. Raley moved it be accepted.

Kerby moved that the amendment be amended so that the three members would be appointed to serve a term of three years, three members a term of two years, and three members a term of one year. Seconded and carried as amended. This was discussed briefly by J. F. Critchlow, Colonge, and Beer.

The applications for membership from J. Clinton Bown, F. K. Root, and Charles W. Woodruff were voted upon. These men were elected to membership.

A letter from Carl L. Sandberg, expressing appreciation for the floral offering sent by the society to Mrs. Sandberg's funeral, was read.

Minutes of the Salt Lake County Medical Society February 11, 1924

Sixty-seven members and three visitors were present at the regular meeting of the Salt Lake County Medical Society held at the Commercial Club, Salt Lake City, Monday evening, February 11. President Kerr presided.

Minutes of the previous meeting were read and accepted without correction.

Judge Harold M. Stevens spoke on the purpose of the Community Clinic and gave a report of the work done and cost of operating clinic. He also gave some examples of the cases treated, giving brief clinical history and results.

No clinical cases were presented.

The first paper of the scientific program was entitled "Goitre in the Great Basin," given by George W. Middleton. He discussed the distribution, probable cause, treatment and results in the goitre cases he has treated. He also discussed the technique of operation, post-operative treatment and medical treatment. This excellent paper was discussed by L. J. Paul, W. L. Lindsay, Skidmore, Hampton, Hosmer, and Ralph Richards.

E. S. Pomeroy gave a paper on "Newer Methods in the Treatment of Syphilis." He discussed the variout methods of treatment with the older and newer drugs giving their uses and dangers. Discussion by Schulte, Estes, and Rich.

B. W. Black read a brief outline of the life of our late member, L. B. Laker of Eureka, Utah. He read a resolution and moved that it be spread upon the minutes and a copy sent to the family of the deceased. Seconded and carried.

W. R. Tyndale reported for the Library Committee, putting forth the idea of having a loan library. He moved that the Library Committee should be enlarged so as to include one member of all the various specialties. Seconded and carried.

M. M. Nielson reported that the committee appointed to investigate institutions caring for charity cases was not ready to give a final report.

Nevada State Medical Association

HORACE J. BROWN, M. D., Reno.....President
CLAUDE E. PIERSALL, M. D., Reno.....
..Secretary-Treasurer and Associate Editor for Nevada

Annual Meeting—Great enthusiasm is being manifested in the arrangements and program for the next annual meeting of the State Association. Offers of papers are being received in an encouraging number, but we expect more from other members.

Both the Elko County Society and the Eureka "bunch" are 100 per cent in membership and dues, and the Eureka men are 100 per cent in offers for papers.

Our Journal of Medicine goes to print on the 20th of each month. Only our members who have paid before that date may expect their Journal that month. Dues are now due. All members are urged to send in items of interest for publication in the Journal. Either send them to your associate editor for Nevada, or to the editor of the California State Journal of Medicine direct. The California State Journal of Medicine will be glad to give more space to Nevada if material is sent to the editor.

Medical School News

Teaching Therapeutics and the Art of Medicine—With a desire to improve the teaching in practical therapeutics and the art of medicine, the department of medicine at the University of California Hospital has selected fourteen alumni of the school to devote a week of their time to this instruction during the spring semester (January 15 to May 15). Such instruction will be given to senior students and interns at the University Hospital. Each alumni instructor will spend his entire time at the hospital, taking part in ward rounds, assisting in the instruction of students, holding seminars and giving one talk to the entire student body and house staff during the week.

If the plan works to the mutual advantage of students, alumni, and faculty, it probably will be repeated each year. The schedule is as follows:

January 28-February 2, Walter C. Alvarez, 177 Post street, San Francisco.

February 4-9, J. W. Shiels, 516 Sutter street, San Francisco.

February 11-16, Henry Chesley Bush, Arroyo Sanitarium, Livermore, Cal.

February 18-23, James W. Seawell, 117 North street, Healdsburg, Cal.

February 25-March 1, Dewey R. Powell, Farmers and Merchants' building, Stockton, Cal.

March 3-8, Ruby L. Cunningham, Infirmary, Berkeley, Cal.

March 10-15, Elmer W. Bingaman, Gonzales, Cal.

March 17-22, Daniel I. Aller, 908 Mattei building, Fresno, Cal.

March 24-29, John N. Chain, Fourth and E streets, Eureka, Cal.

March 31-April 5, A. A. Alexander, 1307 Broadway, Oakland, Cal.

April, 7-12, Irvin H. Betts, Visalia, Cal.

April 14-19, Otto T. Schulze, Napa, Cal.

April 21-26, Ergo A. Majors, 532 Fifteenth street, Oakland, Cal.

April 28-May 3, Dan H. Moulton, Chico, Cal.

University of California Medical School—Several conferences have been held by members of the faculties of the Stanford University Medical School and the University of California Medical School for the purpose of discussing questions of medical education which have arisen. At a recent conference a committee, composed of William Ophuls, Frank M. McFarland, Emmet Rixford of Stanford University and W. P. Lucas, C. L. A. Schmidt, and L. S. Schmitt of the University of California Medical School reported the results of a study of the present premedical requirements.

By action of the Graduate Council of the University of California, medical students may offer advanced work in the medical curriculum toward the master's degree. Work in the clinical departments may also be offered toward the degree of Doctor of Philosophy.

A joint conference between representatives of the Graduate Council and the Medical School has recommended that the proposed degree of Doctor of Public Health be not granted unless the candidate has previously received the degree of Doctor of Medicine.

A committee of the faculty is now at work studying a revision of the undergraduate medical curriculum, with a view to making such changes as are desirable under the present Medical Practice Act.

In order that medical students may appreciate the value of carrying out the resolution of the Medical Society of California relative to a health center, the advisory board of the Medical School authorized the establishment of an adult health center in connection with the University of California out-patient department.

By mutual agreement the affiliation between the University of California Medical School at St. Luke's Hospital has been canceled.

A course of public lectures has been established. These lectures are held on Sunday afternoons at 2:15 p. m. in Toland Hall, University of California Hospital.

A committee of the faculty is now working on a plan to offer courses in graduate instruction during the summer months.

L. S. Schmitt, acting dean, has been delegated to attend the meeting of the Association of American Medical Colleges to be held in Omaha, February 28 and 29, 1924, and the Conference on Medical Education to be held in Chicago on March 3, 4, and 5, 1924.

The following changes and additions to the faculty have recently been made: Arthur D. Houghton appointed as associate in Anatomy, vice Katharine Scott Bishop, resigned; William S. Kiskadden appointed as assistant in Surgery; John J. Sampson appointed as assistant in Medicine; Frances A. Torrey appointed as assistant in Dermatology.

The following gifts have been received:

The gift of $1200 from Dr. Ferdinand Stabel for the establishment of the Ferdinand Stabel Research Fellowship in Bacteriology, for the study of chemotherapy, particularly basic Fuchsin in Tuberculosis and related problems, effective January 1, 1924, and ending December 31, 1924, with the understanding that Stabel reserves the right to continue this work after that date by making further financial provisions.

The gift of $717.64 from Dr. Norman T. Bridge, being his annual contribution to the Edith Claypole Memorial Research Fellowship in Pathology.

The gift of $1500 from the National Research Council, representing an advance from the appropriation "Sex Research Fund, 1924," to be used by H. M. Evans, in connection with his investigations of the physiology of reproduction.

The gift of $200 from the Alexander Ector Orr Foundation to be used for the furtherance of educational and medical work along charitable lines in the University hospitals, with particular attention to the work among destitute children.

The gift from Dr. Albert H. Rowe to the department of Biochemistry and Pharmacology amounting to $300, to be paid over a period of six months for use in connection with the studies in carbohydrate metabolism.

Stanford University School of Medicine (William Ophuls, dean; Albion Walter Hewlett, secretary of the medical faculty)—Summer Quarter, 1924—Between June 15 and September 1, 1924, while there is no routine teaching of under-graduate students at the Medical School, properly qualified graduates in medicine and medical students of this and of other schools are invited to avail themselves of the opportunities for clinical and laboratory work as special workers. The workers are expected to assist in the practical work of the various departments. Their work will be supervised, but no set courses will be given. Opportunity to make special studies of clinical and laboratory problems will also be offered. There will be a registration fee of $3, and in some departments an additional fee for special instruction varying from $50 to $100 will be charged.

The minimum period of attendance will be four weeks. Participants are urged to devote their full time to one subject.

Applications, which should give an outline of the medical experience of the applicant, should be sent to the dean, Stanford University Medical School, 2398 Sacramento street, San Francisco.

Special workers will be received in the following departments:

Pharmacology—Research. P. J. Hanzlik. Charges will cover cost of animals and supplies only.

Pathology—Research in morbid anatomy and ex-

perimental pathology. W. Ophuls and J. R. Oliver. Charges will cover cost of animals and supplies only.

Pediatrics—H. K. Faber. Work in in and out-patient departments. Fee, $50 a month.

Neuro-Psychiatry—H. G. Mehrtens. Fee, $100 a month.

Skin and Syphilis—H. E. Alderson and staff. Fee, $50 a month.

Metabolism Laboratory — Research. Dr. Addis. Charges will cover cost of animals and supplies only.

Radiology—W. E. Chamberlain and R. R. Newell. Fee, $100 first month; $50 for each succeeding month.

Physiotherapy—H. L. Langnecker. Fee $50 for two and one-half months.

General Surgery—S. Stillman. Work in in and out-patient department. No fee.

Orthopedic Surgery—L. W. Ely. (1) Work in the out-patient department. No fee. (2) Special course. Fee, $100 for four weeks.

Genito-Urinary Surgery—J. R. Dillon. (1) Work in the out-patient department. No fee. (2) Special course for four weeks. Fee, $100.

Ophthalmology — A. B. McKee. Work in out-patient department. No fee.

Otorhino-laryngology—J. A. Bacher. Not less than three months, July 1 to October 1. Limited to three workers. Fee, $50 a month.

Surgical Pathology—F. E. Blaisdell. August and September. Fee depends on character of work desired. Blaisdell will give a special course on fractures and dislocations on the cadaver during August and September. Fee to be determined.

Obstetrics and Gynecology—A. B. Spalding, L. A. Emge, A. V. Pettit, and H. von Geldern. Clinical work limited to six workers. No fee.

Gynecological Laboratory—Research. A. B. Spalding and L. A. Emge. Charges will cover cost of animals and supplies only.

Obstetrics, San Francisco Hospital—K. L. Schaupp. Limited to four workers. No fee.

Female Urology—W. E. Stevens and L. Michelson. Limited to two workers. Fee, $200 for six weeks.

The 1924 Lane Lectures—William Ophuls, dean of Stanford Medical School, announces that Ludwig Aschoff, professor of pathology of the University of Freiberg, Germany, has accepted the invitation of Stanford University to deliver the Lane medical lectures for the year 1924. The probable date of the lectures will be from Monday, May 26, to Friday, May 30, inclusive, at 8 p. m., in Lane Hall of the Stanford University Medical School, San Francisco.

The subjects of the lectures will be: The Place of Origin of the Biliary Pigment; Atherosclerosis; Ovulation and Menstruation; Inflammation; Fatty Changes in Disease.

Examination for the United States Public Health Service — Examinations of candidates for entrance into the regular corps of the United States Public Health Service will be held at San Francisco, Cal., April 7, 1924.

Candidates must be not less than 23 nor more than 32 years of age, and they must have been graduated in medicine at some reputable medical college, and have had one year's hospital experience or two years' professional practice. They must pass satisfactorily, oral, written and clinical tests before a board of medical officers and undergo a physical examination.

Successful candidates will be recommended for appointment by the President, with the advice and consent of the Senate.

Requests for information or permission to take this examination should be addressed to the Surgeon-General, United States Public Health Service, Washington, D. C.

H. S. CUMMING,
Surgeon-General.

AMERICAN MEDICAL ASSOCIATION NEWS

The Chicago Session

Reduced Railroad Rates—The passenger associations of various sections of the United States have established a rate of one and one-half fare for the benefit of those who will attend the Seventy-fifth Annual Session of the American Medical Association. The benefit of this rate will be extended to members of the association and to members of their families who accompany them to Chicago. It will be necessary to purchase tickets to Chicago, paying the regular fare. At the time tickets are purchased, certificates must be secured from the railroad agents. These certificates must be validated by the secretary of the association and by railroad representatives at Chicago. After validation, the certificates will entitle holders to a rate of one-half fare for the return trip to their homes. Tickets for the occasion will be placed on sale in the extreme Far Western States not later than June 3; in territory nearer to Chicago, the dates of sale will be adjusted in accordance with distances to be traveled.

Hotel Reservations for Delegates—The House of Delegates instructed the secretary of the association to arrange for hotel accommodations for all delegates during the Seventy-fifth Annual Session of the American Medical Association, to be held in Chicago, June 9-13. In compliance with these instructions, tentative reservations have been made at the Drake Hotel, Chicago, so that each member of the House of Delegates may be assured of a room at that hotel. The names of all delegates, as far as they are known at the present time, have been sent to the management of the hotel, and letters have gone out to all delegates requesting them to write direct to the Drake Hotel asking for the reservation of such accommodation as may be desired. In writing the hotel, delegates should be careful to specify that the accommodations desired are to be provided from the allotment of rooms tentatively reserved for members of the House of Delegates. Reservations should be made at the earliest possible time. If, for any reason, a delegate does not wish to have accommodations at the Drake Hotel, he should notify the secretary of the association as soon as possible in order that reservations tentatively made and not required may be released for the accommodation of other members of the association.

Announcement by Committee on Hotels — The Committee on Hotels of the local Committee of Arrangements has arranged with the Hotel Men's Association in Chicago for the provision of satisfactory accommodations for all who expect to attend the Seventy-fifth Annual Session of the American Medical Association, June 9-13. This committee has the active co-operation of the Bureau of Conventions of the Chicago Association of Commerce. Members of the association who expect to attend the session should write direct to the hotels of their choice for reservations. If the preferred hotel is unable to provide accommodations as desired, the request will be turned over to the Committee on Hotels of the Local Committee of Arrangements, and accommodations at another hotel will be secured. Duplicate reservations should not be made. In the initial request for reservations, the date of arrival in Chicago, as well as the length of time the applicant expects to remain and the number and kind of rooms desired, should be clearly stated. It is also desirable that second and third choice of hotels be stated. The Committee on Hotels will make every effort to secure accommodations in keeping with expressions of preference. Dr. Frank R. Morton is chairman of the Committee on Hotels of the Local Committee of Arrangements. If satisfactory arrangements for hotel reservations cannot be made through communications addressed directly to hotels, the Committee on Hotels may be addressed at the office of the Local Committee of Arrangements, Room 1522, 25 East Washington Street, Chicago.

A complete list of Chicago's leading hotels and rates to be charged will appear in the Journal in the near future.

BOOK REVIEWS

Diseases of the Skin. Including the acute eruptive fevers. By Frank Crozer Knowles, M. D. Second edition. Philadelphia and New York: Lea & Febiger. 1923.

Every book has its own special excellencies, and the high point in this one lies in its illustrations and plates. For instance, there is an impressive photograph of erythema multiforme, and a speaking likeness of the cutaneous lesions of dermatitis herpetiformis, even to the tottering attitude of the patient. It is entirely fitting that this malady should be well illustrated here, as Duhring, who first described the disease as a separate entity, was the author's honored teacher.

Another interesting portrayal is of a belladonna eruption with the plasters in place, from which the eruption arose. It must always be remembered that severe constitutional poisoning may arise from this source, and, by the way, this bears witness to the efficacy of these plasters, which are now admirably prepared by our best drug houses.

Everyone conversant with skin disease is aware of the difficult problems presented by lesions of the hands, both those which are incurable and those which may be cured. A good photograph is given of epidermolysis bullosa of the hands, which is a congenital affection enduring throughout the entire life of the patient, and for which, as being incurable, only ameliorative remedies should be prescribed. As a contrast, there is an example of dermatitis from packing quinine, a most striking photograph, for which the remedy, a change of work, is obvious. Another good point brought out in the illustrations is of a kind of eczema which yields especially well to X-ray treatment. In fact, the hands are well pictured, and a list of these and the other illustrations would have been a decided advantage to this book.

There is yet another good point in the book, a chapter entitled: "Regional Distribution of Diseases of the Skin." As certain diseases do occur most commonly in certain regions, such an arrangement should be helpful in arriving at a diagnosis. In fact, Sabouraud has written a book, with the diseases arranged according to this plan. D. W. M.

Sexual Problems of Today. By William J. Robinson, M. D. Twelfth Edition.

Many of those who believe the sordid story of sex, as seen by the physician, should be made public property will endorse Dr. Robinson's book. Those who believe that much of the information given should remain privileged information of educated physicians will condemn the book in unmeasured terms.

Surgical and Mechanical Treatment of Peripheral Nerves. By Byron Stookey. With a chapter on Nerve Degeneration and Regeneration. By G. Carl Huber. 475 pages. Illustrated. Philadelphia and London: W. B. Saunders Co. 1922. Price $10.

A well written book of nearly 500 pages, containing over 200 drawings, diagrams, and photomicrographs. The book has value, largely in giving the experiences and opinions of the writer.

The title indicates the contents only in part. Perhaps one-quarter of the book is given over to a consideration of anatomy, gross and microscopic, nerve degeneration and regeneration, and a critical consideration of the earlier methods of nerve repair.

The principal nerves of the extremities, the principal motor cranial nerves, and the plexuses are taken up in individual chapters. Bibliographies appended to each chapter are excellent and well selected. While in certain portions of the book the reader could wish for more detailed consideration of certain points, it has been obviously impossible to follow all the by-paths into which one's interest might be led.

This reviewer wishes that more consideration might have been given to the details and possibilities of direct examination of individual muscle function. In the chapter on mechanical treatment, however, the exceptional experimental work of McLeod and his associates on the value of massage and electrical treatment has been omitted. The frequency with which cable grafts are featured seems to give undue emphasis to their practical value and the comparatively rare need of them.

The book is most readable and should be a valuable addition to the library of those interested in this branch of surgery. H. C. N.

Management of the Sick Infant. By Langley Porter, M. D. and William E. Carter, M. D. Second revised edition, illustrated. St. Louis: C. V. Mosby Co., 1924.

It is gratifying to students and colleagues of the authors that their book has reached a second edition in such a short time. Editors, as other physicians, must keep constantly available revised editions of good books to assist them in their work. We cannot say more for Doctor Porter's and Doctor Carter's book than that it is used as the editor's desk copy.

Blood Chemistry. Colorimetric methods for the general practitioner, with clinical comments and dietary suggestions. By Willard J. Stone. 75 pages. New York: Paul Hoeber. 1923. Price, $2.25.

A small book (75 pages) embracing laboratory methods of blood chemistry, and its clinical application, renal function determination, food lists for the dietetic control of disturbances of metabolism and test and maintenance diets for the control of diabetes.

It is a compilation of tests and dietary methods found, and more comprehensively presented, in the usual text-books on these subjects.

The obvious purpose of the book is to encourage blood chemistry in the "small" laboratory. The tests are given with fractional portions of the normal amounts called for in the original methods; but the contraction of methods already microscopical renders more difficult and less accurate tests that demand the utmost exactness in their performance.

E. A. V.

An Introduction to the Study of Mental Disorders. By Francis M. Barnes. Second edition. 295 pages. St. Louis: C. V. Mosby Company. 1923. Price, $3.75.

A second edition means that there has been a demand for the book, and examination explains it. It is short. There are less than 300 pages. The style is good and it makes easy reading. It has given a concise history of psychiatry from the ancients to the present, and bridges the gap between the somatic school of Kraepelin and the newer work of the psychological school without belittling or exalting either, although it is apparent that the author does not rave over Freud. None of the arch-Freudians are mentioned in the bibliography.

As an introduction to psychiatry for medical students, it serves its purpose excellently. E. W. T.

Intravenous Therapy. Its application in the modern practice of medicine. By Walton Forest Dutton, M. D. 542 pages. Illustrated. Philadelphia: F. A. Davis Company. 1924.

Much heterogeneous information is gathered between the two covers of this book. The chapters on transfusion are complete and historically interesting. They make up about a sixth of the whole book. Besides them is an encyclopedia of diseases, listed alphabetically, most of which might well have been omitted. L. E.

BOOKS RECEIVED

Hernia: Its Anatomy, Etiology, Symptoms, Diagnosis, Differential Diagnosis, Prognosis, and Operative Treatment. By Leigh F. Watson, M. D., Associate in Surgery, Rush Medical College, Chicago. Two hundred and thirty-two original illustrations by W. C. Shepard. St. Louis: C. V. Mosby Company. 1924.

Practical Chemical Analysis of Blood. A book designed as a Brief Survey of this Subject for Physicians and Laboratory Workers. By Victor Caryl Myers, Ph. D., Professor and Director of the Department of Biochemistry, New York Post-Graduate Medical School and Hospital. Second Revised Edition. Illustrated. St. Louis: C. V. Mosby Company. 1924.

Management of the Sick Infant. By Langley Porter, M. D., Professor of Clinical Pediatrics, University of California Medical School; Visiting Physician San Francisco Children's Hospital; Consulting Pediatrician, Baby Hospital, Oakland; Mary's Help Hospital, San Francisco; and William E. Carter, M. D., Assistant in Pediatrics and Chief of Out-Patient Department, University of California Medical School; Attending Physician San Francisco Hospital, San Francisco. Second Revised Edition. Illustrated. St. Louis: C. V. Mosby Company. 1924.

Geriatrics: A Treatise on the Prevention and Treatment of Diseases of Old Age and the Care of the Aged. By Malford W. Thewlis, M. D., Editor Medical Review of Reviews, The Therapeutic and Dietetic Age. With Introduction by A. Jacobi, M. D., and I. L. Nascher, M. D. Second Edition, Revised and Enlarged. St. Louis: C. V. Mosby Company. 1924.

Lectures on Endocrinology. By Walter Timme, M. D., Attending Neurologist, Neurological Institute, New York; Professor of Endocrinology, Broad Street Hospital; Professor of Nervous and Mental Diseases, Polyclinic Medical School and Hospital. With 27 illustrations. Paul B. Hoeber, Inc., New York. 1924.

Intranasal Surgery. By Fred J. Pratt, M. D., Assistant Professor, Eye, Ear, Nose and Throat, Medical School, University of Minnesota, and John A. Pratt, M. D., Assistant Professor as above. Illustrated with 195 half-tone engravings. Philadelphia: F. A. Davis Company. 1924.

Intravenous Therapy: Its Application in the Modern Practice of Medicine. By Walton Forest Dutton, M. D., Medical Director Polyclinic and Medico-Chirurgical Hospitals, Graduate School of Medicine, University of Pennsylvania. With 59 illustrations. Philadelphia: F. A. Davis Company. 1924.

Fighting Foes too Small to See. By Joseph McFarland, M. D., Professor of Pathology in the Medical Department of the University of Pennsylvania. With 64 engravings. Philadelhpia: F. A. Davis Company, Publishers. 1924.

Report From the Department of Pathology and the Department of Clinical Psychiatry, Central Indiana Hospital for the Insane, 1917-1918 and 1918-1919. Vol. VIII. Indianapolis: William B. Burfod, Contractor for State Printing and Binding. 1923.

Sexual Problems of Today. By William J. Robinson, M. D., President American Society of Medical Sociology, etc. Twelfth Edition. The Critic and Guide Company, 12 Mt. Morris Park West, New York. 1923.

Genito-urinary Diseases and Syphilis. By Henry H. Morton, M. D., Professor of Genito-urinary Diseases and Syphilis, in the Long Island College Hospital, and Genito-urinary Surgeon to the Long Island College Hospital and Polhemus Memorial Clinic, etc. Fifth Edition, Revised and Enlarged. With 328 illustrations and 38 full-page colored plates. New York: Physicians and Surgeons' Book Company, 352 West Fifty-ninth Street. 1924.

Surgical Pathology. By Joseph McFarland, M. D., Professor of Pathology in the Medical Department of the University of Pennsylvania. With 435 illustrations. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street. 1924.

Practical Electrotherapeutics and Diathermy. By G. Betton Massey, M. D., Fellow and Former President American Electrotherapeutic Association; Former Surgeon to the American Oncologic Hospital, etc. New York: The Macmillan Company. 1924.

Reapportionment of Delegates to American Medical Association (Secretary West of the A. M. A. to Secretary Emma W. Pope of the California Medical Association)—"The last reapportionment of delegates was effected at the Seventy-second Annual Session, held at Boston in 1921. Another reapportionment will, therefore, be made at the Seventy-fifth Annual Session of the Association to be held in Chicago, June 9-13, 1924. As the reapportionment will be made on the basis of the membership in constituent associations, as that membership has been reported and recorded on the membership records of the American Medical Association on April 1, 1924, it is important that this office shall have complete reports of the membership of your association so that the names of all members may be duly recorded in this office before April 1, 1924.

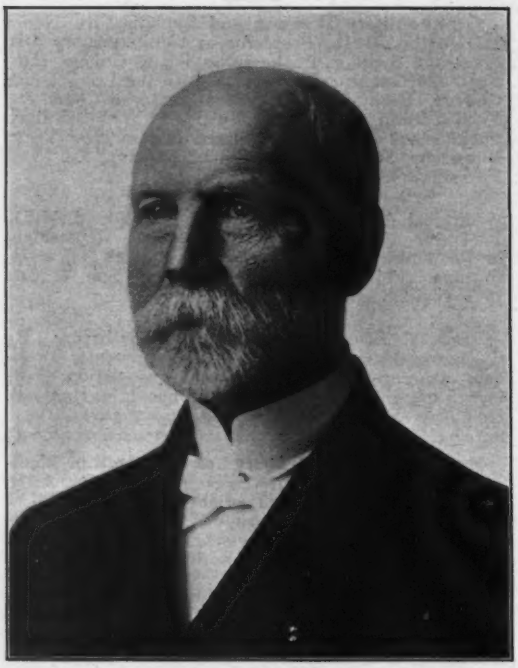
This matter is brought to your attention now in order that you may remind the secretaries of your component county medical societies of the need of the fullest possible reports of membership in their respective organizations.

Delegates already elected or to be elected for service in the House of Delegates for the Seventy-fifth Annual Session of the American Medical Association in June, 1924, will be in no way affected by the reapportionment to be made in Chicago.

On January 1, 1924, the membership of the American Medical Association, which, of course, is the combined membership of the constituent State and territorial associations, was 89,835. It is sincerely hoped that this splendid membership will be maintained and even increased by the affiliation of desirable and eligible physicians, and that the membership in your State will be maintained at a figure that will insure that there will be no reduction of representation in the House of Delegates."

Physiotherapists Meet—Some forty physiotherapists of Northern California attended a luncheon-meeting at the Clift Hotel in San Francisco recently. Miss Hazel Furscott, president of the association, presided and the meeting was addressed by James T. Watkins and W. E. Musgrave. Those present were: Florence Atkinson, Ethel Johnson, Beulah Rader, L. B. Bryan, Mrs. P. Rowe, Dorothy Vockel, Hilda Knausenberger, Hazel E. Furscott, Charlotte Ballard, Hilda Rodway, Elizabeth R. Stoner, Lou Kindall, Sarah R. Davis, Gus Hanson, Ruth Hassell, Ethel McDonald, Evelyn Lewis, Alice Hampton, Carol Alunes, Dagmar Magnisen, Mary L. Schaaf, Alice Peterson, Bertha Monroe, Mabel Penfield, Helen Boucher, Rose Swantelson, Miss Münsing.

Obituary



W. FLETCHER McNUTT
1839-1924
By C. F. Buckley, M. D.

Dr. McNutt was born in Nova Scotia in 1839 and graduated in medicine from Harvard. As he grew in years, he grew more ambitious and thought that he must go to other spheres where erudition was supposed to be greater and the courses more finished. So he betook himself to Europe and took a degree in Edinborough and then returned to this country and devoted all his energy to alleviating the sufferings of the Northern battalions who were devoting their lives to the cause of the Union. He served then in the Civil War for three years and retired with honor. As to the number of engagements and such things, it is unnecessary to go into details; he did his duty loyally and nobly. He was in some of the severest engagements, particularly around Vicksburg, and did some remarkable surgical work during the siege of that city.

If he had any characteristic more commendable than another it was his poise. I don't think his closest friends ever saw him lose his temper or get excited about any important thing he was engaged in. To young men of the medical profession, he was undoubtedly an outstanding example of the understanding physician.

He came to San Francisco in 1869 and became one of the city's leading medical authorities. He also filled two public posts, with great credit to himself and the community: he was prison director and also police commissioner, and introduced several innovations that are an outstanding benefit to the community.

I do not think that if Dr. McNutt were in the flesh and the storms and strife around and about us he would care for any long eulogy from me or anyone else. Whatever faults he possessed were his own; nobody ever suffered from them. The charm of his life was his sincerity and devotion.

May God reward a very worthy friend and an excellent doctor.

NEW MEMBERS

Los Angeles—Joseph M. Harris, Harry S. Fist, John P. Gilmer, William G. Raber, Clinton Roath, Leonard C. Sloane, Edson H. Steele, Matsuta Takahashi, Henry M. Thompson, Giuseppe Vercellini, Earl W. Wells, Harold R. Witherbee, Madison J. Keeney,

San Diego—Bernice M. Hazen, Donald T. Babcock, Henry C. Babcock.

San Francisco—Randolph G. Flood, Louis J. Oviedo, Mast Wolfsohn.

Santa Rosa—George W. Mallory.

Woodland—James E. Harbinson.

Colfax—Hugh G. Chisholm, Richard O. Schofield.

Pasadena—L. L. Henninger.

Long Beach—Z. Gorton Jones.

Glendale—Alonzo E. Mack.

DEATHS

Dirks, Charles B. Died at Los Angeles, January 20, 1924. Graduate of Rush Medical College, Chicago, 1903. Licensed in California, 1914. He was a member of the Los Angeles County Medical Society, the California Medical Assocjation, and a Fellow of the American Medical Association.

Harrison, Samuel Ingelby. Died at San Francisco, January 6, 1924, age 66. Graduate of Rush Medical College, 1887. Licensed in California, 1898. He was a member of the San Francisco County Medical Society, the California Medical Association, and the American Medical Association.

Hodkinson, William Austin. Died at Santa Monica, January 28, 1924, age 54. Graduate of University of Pittsburgh School of Medicine, 1894. Licensed in California, 1910. He was a member of the Los Angeles County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

Kaull, Lee Perry. Died at San Bernardino, December 19, 1923, age 51. Graduate of Kansas City Medical College, 1898. Licensed in California, 1908. He was a member of the Los Angeles County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

Koltz, Bernard J. Died at San Francisco, December 17, 1924, age 45. Graduate of the University of California Medical School, San Francisco, 1900. He was a member of the Solano County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

McNutt, William Fletcher, Sr. Died at San Francisco, January 28, 1924, age 85. Graduate of Royal College of Surgeons, Scotland, 1865, and the Medical Department of the University of Vermont, 1867. He was formerly a member of the San Francisco County Medical Society and the California Medical Association.

Reed, Elgar. Died at Chino, February 13, 1924, age 58. Graduate of the Cincinnati College of Medicine and Surgery, 1893. He was a member of the San Bernardino County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

Stallard, Samuel Lawrence. Died at Greenwood, New York, February 8, 1924, age 38. Graduate of the Kentucky School of Medicine, 1907. Licensed in California, 1922. He was a member of the New York State Medical Association.